

SKIDMORE V. LED ZEPPELIN ET AL.

NOS. 16-56057 & 16-56287

Trial Exhibits on CD:

1. Exhibit 51A (recording of *Taurus* deposit copy, Mathes);
2. Exhibit 61A (recording of *Taurus* deposit copy, Ferrara);
3. Exhibit 525V (recording of *Taurus* deposit copy, Hanson);
4. Exhibit 527V (recording bass clef of *Taurus* deposit copy, Hanson); and
5. Exhibit 2961 (recording *To Catch a Shad*, Mathes);

Paper Trial Exhibits:

1. Exhibit 319 (poster, Texas International Pop Festival);
2. Exhibit 450 (Superior Court Stipulation and Order);
3. Exhibit 501-0001 (plaintiff's musicologist's exhibit);
4. Exhibit 509 (plaintiff's musicologist's chart);
5. Exhibit 535 (plaintiff's copy of a portion of a photograph purporting to show Robert Plant talking to Mark Andes);
6. Exhibit 2058 (*Taurus* deposit copy);
7. Exhibit 2070 (1967 Exclusive Songwriter's and Composer's Agreement);
8. Exhibits 2092 (defendants' musicologist's FRCP 26(a)(2)(B) report);
9. Exhibit 2114 (photocopy of CD showing songs performed by Spirit at Feb. 3, 1970 concert in London, England);
10. Exhibit 2405 (defendants' musicologist's excerpts of published music books);
11. Exhibit 2705 (excerpt of defendants' musicologist's FRCP 26(a)(2)(B) report); and
12. Exhibit 2964 (Hollenbeck Music's 1967 registration of copyright in the *Taurus* musical composition).

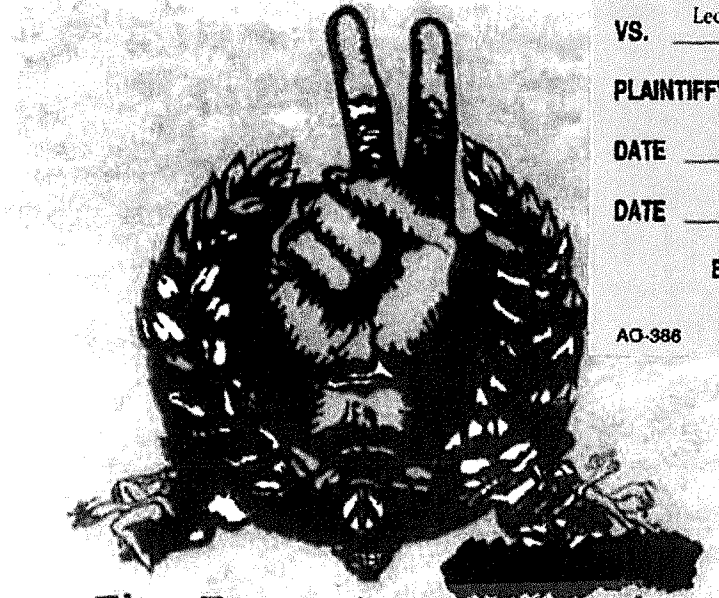
SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 319

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PLANT AND JOHN PAUL JONES



The Texas International POP FESTIVAL

SATURDAY

August 30
Canned Heat
Chicago Transit
Authority
James Cotton Blues
Band
Janis Joplin
B. B. King
Herbie Mann
Rotary Connection
Sam & Dave

SUNDAY

August 31
Chicago Transit
Authority
James Cotton
Delaney &
Bonnie & Friends
Incredible String
Band
B. B. King
Led Zeppelin
Herbie Mann
Sam & Dave

MONDAY

September 1
Crosby, Stills,
Nash & Young
Delaney &
Bonnie & Friends
B. B. King
Nazz
Sly and the
Family Stone
Spirit
Sweetwater
Ten Years After
Tony Joe White

FREE CAMPING NEARBY

light show by Electric Collage
stage and sound by Hanley

LABOR DAY WEEKEND

AUG. 30-31, SEPT. 1

3 BIG DAYS
Daily 4 P.M.

**DALLAS INTERNATIONAL MOTOR
SPEEDWAY**

INTERSTATE 35 E only 12 miles north of Dallas

Michael Skidmore, Trustee for the
Randy Craig Wolfe Trust

VS. Led Zeppelin et al.

PLAINTIFF'S EXHIBIT 319

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____

Deputy Clerk

AO-386

EXHIBIT 319

WIT: Ferguson

DATE: 1-13-16

DAYNA HESTER, CSR 9970

319-00001

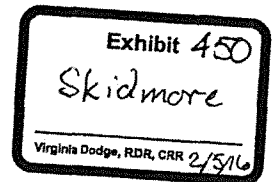
SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 450

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PLANT AND JOHN PAUL JONES



1 ROBERT LAMONT COIT
 2 A Professional Law Corporation
 3 770 County Square Drive, Suite 200
 4 Ventura, CA 93003
 5 (805) 650-1197

6 Attorney for Bernice C. Pearl

VENTURA
 SUPERIOR COURT
 FILED

FEB 19 2002

MICHAEL D. PLANET
 Executive Officer and Clerk

BY: _____ Date: _____

7
 8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
 9 FOR THE COUNTY OF VENTURA

10 In re the Conservatorship of)
 11 the estate of)
 12 RANDY CRAIG WOLFE,)
 13 Conservatee,)

CASE NO. P 72493

STIPULATION TO ORDER AND
 ORDER FOR SUBSTITUTED
 JUDGMENT TO CREATE AND
 FUND REVOCABLE LIVING
 TRUST AND EXECUTE A POUR-
 OVER WILL (Probate Code
 Sec. 2580(b)(5)) and (13))

Date: February 19, 2002
 Time: 8:30 A.M.
 Dept: 31

18 The PETITION FOR SUBSTITUTED JUDGMENT TO CREATE AND FUND
 19 REVOCABLE LIVING TRUST AND EXECUTE A POUR-OVER WILL by Conservator,
 20 Bernice C. Pearl, Petitioner, came on regularly for hearing at
 21 10:00 A.M. on January 29, 2002, in Courtroom 31, of the above
 22 entitled Court. Petitioner appeared by her attorney, Robert Lamont
 23 Coit, a Professional Law Corporation. The matter was continued to
 24 February 19, 2002. Counsel for Petitioner and Assistant County
 25 Counsel Donald Hurley on behalf of the guardian ad litem for the
 26 minor child Quinn appeared at the hearing and subsequently
 27 conferred regarding terms of the proposed Trust and Substituted
 28 Judgment. Points and authorities having previously been filed and
 read, the Court finds that the notice of hearing has been given and

1 served as required by law and that all allegations of the petition
2 are true.

3 The Petition should be granted.
4

5 THE COURT FURTHER FINDS:

6 Petitioner is the duly appointed, qualified and acting
7 Conservator of the estate of the above-named Conservatee.

8 The conservatee is a missing person who has been missing for
9 more than 5 years and may be presumed to be deceased.

10 Petitioner and the guardian ad litem for the minor child Quinn
11 agree that the terms of the proposed substituted judgment should be
12 amended as follows: Bernice C. Pearl shall be substituted for
13 Quinn Alexander Wolfe as the sole beneficiary of the Proposed
14 Trust; Bernice C. Pearl shall have authority to amend or revoke the
15 proposed trust without further order of the Court upon Order of the
16 Court finding that the Conservatee is dead; the Proposed Trust
17 shall be funded with all royalty, copyright and other intangible
18 rights of the conservatee and the recordings of unreleased music
19 inventoried as assets of the conservatorship, and the remaining
20 assets of the conservatorship, less commissions of the conservator
21 and fees of her attorney and any other expenses of administration
22 as approved by the Court, shall be distributed to Quinn Alexander
23 Wolfe upon his attainment of age 18 on May 6, 2002.

24 IT IS ORDERED AND ADJUDGED THAT:

25 1. Bernice C. Pearl, as conservator of the estate of Randy
26 Craig Wolfe, is authorized and directed to execute the Proposed
27 Trust on behalf of Randy Craig Wolfe under Probate Code section
28 2580(b)(5);

1 2. Bernice C. Pearl, as conservator of the estate of Randy
2 Craig Wolfe, is authorized and directed to execute the Proposed
3 Pour-Over Will on behalf of Randy Craig Wolfe under Probate Code
4 section 2580(b)(5);

5 3. Bernice C. Pearl is authorized to transfer to herself as
6 Trustee of the Proposed Trust these assets of the conservatorship
7 estate and the conservatee:

8 Approximately 25 2 inch multi track tapes
9 of mixes and unreleased musical material

10 Approximately 200 1/4 inch 2 track tapes

11 Approximately 50 CD boxes filled with 80
12 new CD's each

13 Approximately 300 cassettes mostly of
14 unreleased material

15 Recording and Master Purchase Agreement
16 dated December 7, 1999 by Phoenix Media
17 Group, Inc. and Conservator

18 All royalty, copyright, and other intangible
19 rights of the conservatee Randy Craig
20 Wolfe.

21 4. That no bond or annual accounting be required of Bernice
22 C. Pearl, as Trustee of the Trust without further order of this
23 Court on petition under Probate Code, Section 17200 or section
24 15602.

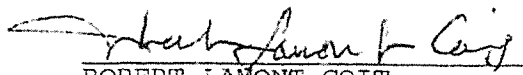
25 5. On or after May 6, 2002, the blocks placed by this Court
26 on the Los Padres Savings Bank IRA CD account #16102865-9 and
27 Washington Mutual Bank CD Account #876-001106747-4 are removed and
28 the conservator shall vest title to the funds on deposit in these
accounts in Quinn Alexander Wolfe.

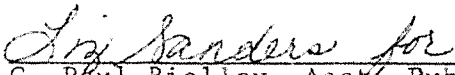
 6. The balance of the conservatorship estate shall be
distributed to the conservatee's son upon his attainment of age 18

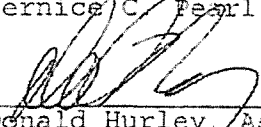
1 on May 6, 2002.

2 Dated: ~~January~~ February 19, 2002

3
4 IT IS SO STIPULATED AND AGREED:

5
6 
7 ROBERT LAMONT COIT,
8 Attorney for Petitioner
9 Bernice C. Pearl

10 
11 G. Paul Biolley, Asst. Public
12 Guardian, Guardian ad Litem
13 for Quinn Alexander Wolfe

14 
15 Donald Hurley, Assistant
16 County Counsel, Attorney for
17 Ventura County Public Guardian

18
19 ORDER

20 IT IS SO ORDERED.

21
22 MELINDA A. JOHNSON
23 JUDGE OF THE SUPERIOR COURT
24
25
26
27
28

SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 501-0001

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PLANT AND JOHN PAUL JONES

CASE NO. PS-CV-9462-RGK-AGR

Michael Skidmore, Trustee for the
Randy Craig Wolfe TrustVS. Led Zeppelin *et al.*

PLAINTIFF'S EXHIBIT 501

DATE _____ IDEN.

DATE _____ EVID.

BY _____

Deputy Clerk









AO-388

CHROMATIC LINES (Data derived from Ferrara reports)**Taurus** [Ferrara 2/10/16 Mus Ex 1, Attachment B p. 2]

A G# G F# F D A

Stairway [Ferrara 2/10/16 Mus Ex 1, Attachment B p. 2]

A G# G F# F G A

"OTHER ART" CITED BY FERRARA**Dido's Lament** (all six chromatic pitches) [Ferrara 2/10/16, Mus Ex 2, Attachment B p. 6; Visual Exhibit D]A G# G F# F  → A**Michelle** [Ferrara 2/10/16 Mus Ex 14 Attachment D p.8]A G# G F# F  → A (major)**Walkin' My Baby Back Home (trombone part)** [Ferrara 2/10/16 Mus Ex 6, Attachment B p. 14]A G# G F# F  → A**It Don't Mean a Thing (If It Ain't Got That Swing)** [Ferrara 2/10/16 Visual Exhibit H]A G# G F# F  → A**Chim Chim Cher-ee** [Ferrara 2/10/16 Mus Ex 4, Attachment B p. 10]A G# G F# F  D#  → AA G# G F# F  → A**Cry Me a River** [Ferrara 2/10/16 Mus Ex 13, Attachment D p. 8]A G# G F# F G C  → A G# G G# F  → A**How Inensitive** [Ferrara 2/10/16 Mus Ex 5, Attachment B p. 12; Visual Exhibit F]A G# G F# F Bb B  → A**To Catch a Shad** [Ferrara 6/1/16 Audio Exhibit 3; Mus Ex 1, p.9]A G# G F# F  → A  → A**What Are You Doing the Rest of Your Life** [Ferrara 2/10/16 Visual Exhibit L]A G# G F# F D B  → A

SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 509

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PLANT AND JOHN PAUL JONES

Arpeggios (broken chords) and melodies in Stairway and Taurus

MEASURE 1								MEASURE 2								
BEAT	1	+	2	+	3	+	4	+	1	+	2	+	3	+	4	+
TAURUS	A	B	C	A	E	C/B	A	B	C		A	E	D		C	A
	A		E	C	G#		E	C	G	C	E	C	F#	C	E	C
STAIR- WAY		C	E	A	B	E	C	B	C	E	C	C	F#	D	A	F#
	A				G#				G				F#			

Arpeggios or chord tones are highlighted in yellow

Melodic two-note sets or pairs from Stairway that are also present in Taurus highlighted in aqua

CASE NO.	15-cv-3462-RGK-AGR
	Michael Skidmore, Trustee for the Randy Craig Wolfe Trust
VS.	Led Zeppelin <i>et al.</i>
PLAINTIFF'S EXHIBIT	509
DATE	IDEN.
DATE	EVID.
BY	
	Deputy Clerk
AO-386	

SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 535

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PLANT AND JOHN PAUL JONES



British musician Robert Plant visits members of the rock group Head after their performance in Milton Keynes, England, circa 1980s. (L-R) Ann Wilson, PG Carmassi and Howard Leese talk on the... [More](#)

January 01, 1980 | [License](#)

[Keywords: Robert Plant, Head, Performance, Milton Keynes](#)

535-0001

SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 2058

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CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

vs. Led Zeppelin, et al.

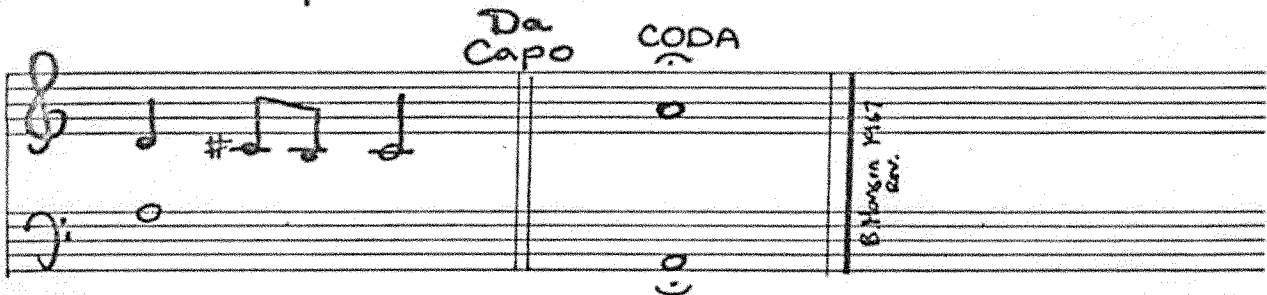
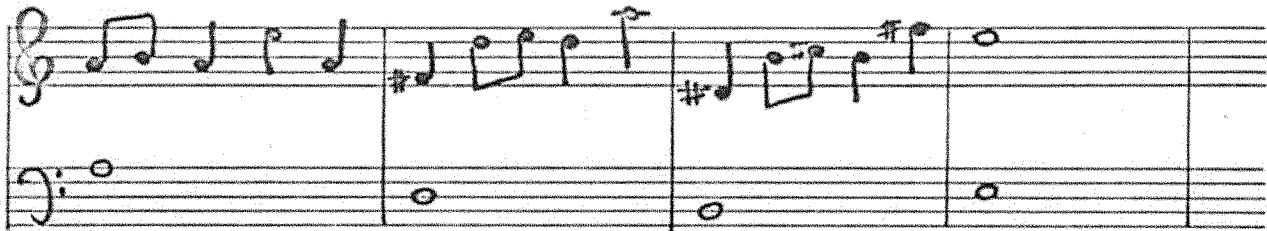
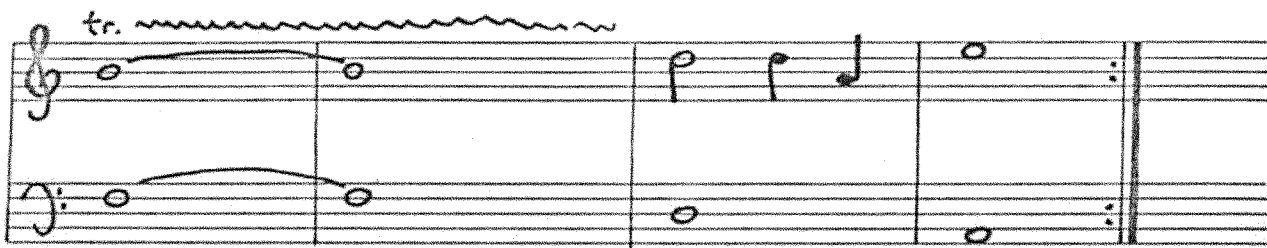
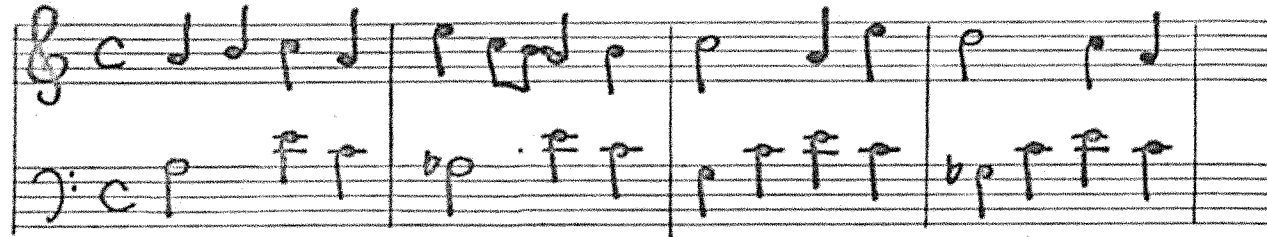
DEFENDANT'S EXHIBIT 2058

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____
Deputy Clerk

TAURUS

by RANDY EU 35222
CALIFORNIAHollenbeck Music Co
(c) 1967

D040443

SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 2070

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PLANT AND JOHN PAUL JONES

*Michael Skidmore, etc.*VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2070

DATE _____ IDEN.

DATE _____ EVID.

BY _____
Deputy ClerkEXCLUSIVE SONGWRITER'S AND COMPOSER'S AGREEMENT

THIS AGREEMENT made and entered into this 29 day of August, 1967 by and between HOLLENBECK MUSIC, 800 Stone Canyon Road, Los Angeles, California 90024, (hereinafter referred to as "Publisher") and RANDY CRAIG WOLFE, 213 Bay Street, Santa Monica, California, (hereinafter referred to as "Writer").

For and in consideration of the mutual covenants herein set forth, the parties do hereby agree as follows:

1. Employment. Publisher hereby employs Writer to render his services as a songwriter and composer and otherwise as may be hereinafter set forth. Writer hereby accepts such employment and agrees to render such services exclusively for Publisher during the term hereof, upon the terms and conditions set forth herein.

2. Term. The term of this agreement shall commence with the date hereof and shall continue in force for a period of one (1) year from said date. Writer hereby grants to Publisher a series of four (4) separate, consecutive and irrevocable options to extend this agreement for periods of one (1) year, each beginning at the expiration of the original term hereof, upon all of the same terms and conditions as are applicable to the original term. Each option may be exercised only by written notice to Writer given by Publisher at least fifteen (15) days prior to the expiration of the then current period.

3. Grant of Rights. Writer hereby irrevocably and absolutely assigns, transfers, sets over and grants to Publisher

its successors and assigns each and every and all rights and interests of every kind, nature and description in and to the results and proceeds of Writer's services hereunder, including but not limited to the titles, words and music of any and all original musical compositions in any and all forms and original arrangements of musical compositions in the public domain in any and all forms, and/or all rights and interests existing under all agreements and licenses relating thereto, together with all world-wide copyrights and renewals and extensions thereof, which musical works have been written, composed, created or conceived, in whole or in part, by Writer alone or in collaboration with another or others, and which may hereafter, during the term hereof, be written, composed, created or conceived by Writer, in whole or in part, alone or in collaboration with another or others, and which are now owned or controlled and which may, during the term hereof, be owned or controlled, directly or indirectly, by Writer, alone or with others, or as the employer or transferee, directly or indirectly, of the writers or composers thereof, including the title, words and music of each such composition, and all world-wide copyrights and renewals and extensions thereof, all of which Writer does hereby represent are and shall at all times be Publisher's sole and exclusive property as the sole owner thereof, free from any adverse claims or rights therein by any other person, firm or corporation.

Writer acknowledges that, included within the rights and interests hereinabove referred to, but without limiting the generality of the foregoing, is Writer's irrevocable grant

to Publisher, its successors, licensees, sublicensees and assigns, of the sole and exclusive right, license, privilege and authority throughout the entire world with respect to the said original musical compositions and original arrangements of compositions in the public domain, whether now in existence or hereafter created during the term hereof, as follows:

(a) To perform said musical compositions publicly for profit by means of public and private performance, radio broadcasting, television, or any and all other means, whether now known or which may hereafter come into existence.

(b) To substitute a new title or titles for said compositions and to make any arrangement, adaptation, translation, dramatization and transposition of said compositions, in whole or in part, and in connection with any other musical, literary or dramatic material as Publisher may deem expedient or desirable.

(c) To secure copyright registration and protection of said compositions in Publisher's name or otherwise as Publisher may desire at Publisher's own cost and expense and at Publisher's election, including any and all renewals and extensions of copyrights, and to have and to hold said copyrights, renewals, extensions and all rights of whatsoever nature thereunder existing, for and during the full term of all said copyrights and all renewals and extensions thereof.

(d) To make or cause to be made, master records, transcriptions, sound tracks, pressings, and any other mechanical, electrical or other reproductions of said compositions, in whole or in part, in such form or manner and as frequently as Publisher's sole and uncontrolled discretion

shall determine, including the right to synchronize the same with sound motion pictures and the right to manufacture, advertise, license or sell such reproductions for any and all purposes, including but not limited to private performances and public performances, by broadcasting, television, sound motion pictures, wired radio and any and all other means or devices whether now known or which may hereafter come into existence.

(e) To print, publish and sell sheet music, orchestrations, arrangements and other editions of the said compositions in all forms, including the right to include any or all of said compositions in song folios or lyric magazines with or without music, and the right to license others to include any or all of said compositions in song folios or lyric magazines with or without music.

(f) Any and all other rights of every and any nature now or hereafter existing under and by virtue of any common law rights and any copyrights and renewals and extensions thereof in any and all of such compositions. Writer grants to Publisher, without any compensation other than as specified herein, the perpetual right to use and publish and to permit others to use and publish Writer's name (including any professional name heretofore or hereafter adopted by Writer), likeness, voice and sound effects and biographical material, or any reproduction or simulation thereof and titles of all compositions hereunder in connection with the printing, sale, advertising, distribution and exploitation of music, folios, recordings, performances, player rolls and otherwise concerning any of the compositions hereunder, and for any

other purpose related to the business of Publisher, its affiliated and related companies, or to refrain therefrom. This right shall be exclusive during the term hereof and nonexclusive thereafter. Writer will not authorize or permit the use of his name, likeness, biographical material concerning Writer, or other identification of Writer, or any reproduction or simulation thereof, for or in connection with any musical composition or works, in any manner or for any purpose, other than by or for Publisher. Writer further grants to Publisher the right to refer to Writer as a "Publisher Exclusive Songwriter and Composer" or other similar appropriate appellation.

4. Exclusivity. From the date hereof and during the term of this agreement, Writer will not write or compose, or furnish or dispose of, any musical compositions, titles, lyrics or music, or any rights or interests therein whatsoever, nor participate in any manner with regard to the same for any person, firm or corporation other than Publisher, nor permit the use of his name or likeness as the writer or cowriter of any musical composition by any person, firm or corporation other than Publisher.

5. Warranties. Writer hereby warrants and represents to Publisher: Writer has the full right, power and authority to enter into and perform this agreement and to grant to and vest in Publisher all the rights herein set forth, free and clear of any and all claims, rights and obligations whatsoever; all the results and proceeds of the services of Writer hereunder, including all of the titles, lyrics, music and

musical compositions, and each and every part thereof, delivered and to be delivered by Writer hereunder are and shall be new and original and capable of copyright protection throughout the entire world, and that no part thereof shall be an imitation or copy of, or shall infringe any other original material and that Writer has not and will not sell, assign, lease, license or in any other way dispose of or encumber the rights herein granted to Publisher.

6. Power of Attorney. Writer does hereby irrevocably constitute, authorize, empower and appoint Publisher, or any of its officers, Writer's true and lawful attorney (with full power of substitution and delegation) in Writer's name, and in Writer's place and stead, or in Publisher's name, to take and do such action, and to make, sign, execute, acknowledge and deliver any and all instruments or documents which Publisher, from time to time, may deem desirable or necessary to vest in Publisher, its successors, assigns and licensees, any of the rights or interests granted by Writer hereunder, including but not limited to such documents required to secure to Publisher the renewals and extensions of copyrights throughout the world of musical compositions written or composed by Writer and owned by Publisher, and also such documents necessary to assign to Publisher, its successors and assigns, such renewal copyrights and all rights therein for the terms of such renewals and extensions for the use and benefit of Publisher, its successors and assigns.

7. Compensation. Provided that Writer shall faithfully and completely perform the terms, covenants and condi-

tions of this agreement, Publisher hereby agrees to pay Writer for the services to be rendered by Writer under this agreement and for the rights acquired and to be acquired hereunder, the following compensation based on the musical compositions which are the subject hereof:

(a) Five (5¢) cents per copy for each and every regular piano copy and for each and every dance orchestration sold by Publisher and paid for, after deduction of each and every return, in the United States.

(b) Ten (10%) per cent of the retail selling price upon each and every printed copy of each and every other arrangement and edition thereof printed, published and sold by Publisher and paid for, after deduction of each and every return, in the United States, except that in the event that such compensation shall be used or caused to be used, in whole or in part, in conjunction with one or more other musical compositions in a folio or album, Writer shall be entitled to receive that proportion of said ten (10%) per cent which the subject musical composition shall bear to the total number of musical compositions contained in such folio or album.

(c) Fifty (50%) per cent of any and all net sums actually received (less any costs for collection) by Publisher from mechanical rights, electrical transcription and reproducing rights, motion picture synchronization and television rights and all other rights (excepting public performing rights) therein, including the use thereof in song lyric folios, magazines or any other editions whatsoever sold by licensees of Publisher in the United States.

(d) Writer shall receive his public performance royalties throughout the world directly from his own affiliated performing rights society and shall have no claim whatsoever against Publisher for any royalties received by Publisher from any performing rights society which makes payment directly (or indirectly other than through Publisher) to writers, authors and composers.

(e) Fifty (50%) per cent of any and all net sums, after deduction of foreign taxes, actually received (less any costs for collection) by Publisher from sales and uses directly related to

subject musical compositions in countries outside of the United States (other than public performance royalties as hereinabove mentioned in paragraph 7(d)).

(f) Publisher shall not be required to pay any royalties on professional or complimentary copies or any copies or mechanical derivatives which are distributed gratuitously to performing artists, orchestra leaders, disc jockeys or for advertising or exploitation purposes. Furthermore, no royalties shall be payable to Writer on consigned copies unless paid for, and not until such time as an accounting therefor can properly be made.

(g) Royalties as specified hereinabove shall be payable solely to Writer in instances where Writer is the sole author of the entire composition, including the words and music thereof. However, in the event that one or more other songwriters are authors along with Writer on any composition, then the foregoing royalties shall be divided equally between Writer and the other songwriters of such composition unless another division of royalties is agreed upon in writing between the parties concerned.

(h) Except as herein expressly provided, no other royalties or moneys shall be paid to Writer.

8. Advances. Subject to all of the terms and conditions of this agreement, Publisher agrees to pay Writer as a nonreturnable advance against the royalties payable to Writer under this or any other agreement whether now in existence or hereafter entered into between Writer and Publisher or its subsidiaries or affiliates, and upon the condition that Writer fully performs all of Writer's obligations hereunder and does not breach any of Writer's warranties, the sum of One Hundred (\$100.00) Dollars upon the execution of this agreement.

9. Accountings. Publisher will compute the total composite royalties earned by Writer pursuant to this agreement

and pursuant to any other agreement, previous, simultaneous or subsequent hereto between Writer and Publisher, within sixty (60) days after the first day of January and the first day of July of each year for the preceding six (6) month period, and will remit to Writer the net amount of such royalties, if any, after deducting any and all unrecouped advances and chargeable costs under this agreement or any other agreement between Writer and Publisher, together with the detailed royalty statement, within such sixty (60) days. All royalty statements rendered by Publisher to Writer shall be binding upon Writer and not subject to any objection by Writer for any reason unless specific objection is made, in writing, stating the basis thereof, to Publisher within one (1) year from the date rendered. Writer shall have the right, upon the giving of at least thirty (30) days written notice to Publisher, to inspect the books and records of Publisher, insofar as the same concerns Writer, at the expense of Writer, at reasonable times during normal business hours, for the purpose of verifying the accuracy of any royalty statement rendered to Writer hereunder.

10. Collaboration with other Writers. Whenever Writer shall collaborate with any other person in the creation of any musical composition, any such musical composition shall be subject to the terms and conditions of this agreement and Writer warrants and represents that prior to the collaboration with any other person, such other person shall be advised of this exclusive agreement and that all such compositions must be published by Publisher. In the event of such collaboration

with any other person, Writer shall notify Publisher of the extent of interest that such other person may have in any such musical composition and Writer shall cause such other person to execute a separate songwriter's agreement with respect thereto, which agreement shall set forth the division of the songwriter's share of income between Writer and such other person, and Publisher shall make payment accordingly. If Publisher so desires, Publisher may request Writer to execute a separate agreement in Publisher's customary form with respect to each musical composition hereunder. Upon such request, Writer will promptly execute such agreement. Publisher shall have the right, pursuant to the terms and conditions hereof, to execute such agreement in behalf of Writer hereunder. Such agreement shall supplement and not supersede this agreement. In the event of any conflict between the provisions of such agreement and this agreement, the provisions of this agreement shall govern. The failure of either of the parties hereto to execute such agreement, whether requested by Publisher or not, shall not affect the rights of each of the parties hereunder, including but not limited to the rights of Publisher to all of the musical compositions written and composed by Writer.

11. Writer's Services. Writer agrees to perform the services required hereunder conscientiously and solely and exclusively for and as requested by Publisher. Writer is deemed to be a "writer for hire" hereunder with full rights of copyright renewal vested in Publisher. Writer further agrees to promptly and faithfully comply with all requirements and requests made by Publisher in connection with its business as

set forth herein. Writer will deliver a manuscript copy of each musical composition hereunder immediately upon the completion or acquisition of such musical composition. Nothing contained in this agreement shall obligate Publisher to exploit in any manner any of the rights granted to Publisher hereunder. Publisher at its sole discretion shall reasonably make studio facilities available for Writer so that Writer, subject to the supervision and control of Publisher, may make demonstration records of the musical compositions hereunder and also for Writer to perform at such recording sessions. Writer shall not incur any liability for which Publisher may be responsible in connection with any demonstration record session without having first obtained Publisher's written approval as to the nature, extent and limit of such liability. In no event shall Writer incur any expense whatsoever in behalf of Publisher without first having received written authorization from Publisher. Writer shall not be entitled to any compensation (in addition to such compensation as may be otherwise provided for herein) with respect to services rendered in connection with such demonstration record recording sessions. Publisher shall advance the costs for the production of demonstration records, and one-half (1/2) of such costs shall be deemed additional nonreturnable advances to Writer and shall be deducted from royalties payable to Writer by Publisher under this or any other agreement between the parties. All recordings and reproductions made at demonstration recording sessions hereunder shall become the sole and exclusive property of Publisher, free of any claims whatsoever by

Writer or any person deriving any rights from Writer.

Writer will, from time to time, at Publisher's request, whenever the same will not unreasonably interfere with other professional engagements of Writer, appear for photography, art work and other similar reasons under the direction of Publisher or its duly authorized agent; appear for interviews with such representatives of newspapers, magazines and other publications; and confer and consult with Publisher regarding Writer's services hereunder and other matters which may concern the parties hereto. Writer will also cooperate with Publisher in promoting, publicizing and exploiting musical compositions written or composed by Writer hereunder, and for any other purpose related to the business of Publisher, its affiliated and related companies. Writer shall not be entitled to any compensation (other than as may be specified herein) for rendering such services.

12. Unique Services. Writer acknowledges that the services to be rendered hereunder are of a special, unique, unusual, extraordinary and intellectual character which gives them a peculiar value, the loss of which cannot be reasonably or adequately compensated in damages in an action at law, and that a breach by Writer of any of the provisions of this agreement will cause Publisher great and irreparable injury and damage. Writer expressly agrees that Publisher shall be entitled to the remedies of injunction and other equitable relief to prevent a breach of this agreement or any provision hereof, which relief shall be in addition to any other remedies, for damages or otherwise, which may be available to Publisher.

13. Actions. Publisher may take such action as it deems necessary, either in Writer's name or in its own name, against any person to protect all rights and interests acquired by Publisher hereunder. Writer will at Publisher's request, cooperate fully with Publisher in any controversy which may arise or litigation which may be brought concerning Publisher's rights and interests obtained hereunder. Publisher shall have the right, in its absolute discretion, to employ attorneys and to institute or defend any action or proceeding and to take any other proper steps to protect the right, title and interest of Publisher in and to each musical composition hereunder and every portion thereof and in that connection, to settle, compromise or in any other manner dispose of any matter, claim, action or proceeding and to satisfy any judgment that may be rendered, in any manner as Publisher in its sole discretion may determine. Any legal action brought by Publisher against any alleged infringer of any musical composition hereunder shall be initiated and prosecuted by Publisher, and if there is any recovery made by Publisher as a result thereof, after deduction of the expense of litigation, including but not limited to attorneys' fees and court costs, a sum equal to fifty (50%) per cent of such net proceeds shall be paid to Writer. If a claim is presented against Publisher in respect of any musical composition hereunder, and because thereof Publisher is jeopardized, Publisher shall have the right thereafter, until said claim has been finally adjudicated or settled, to withhold any and all royalties that may be or become due with respect to such disputed compositions pending

the final adjudication or settlement of such claim. Publisher, in addition, may withhold other royalties to be earned pursuant to this agreement or any other agreement between Writer and Publisher, and its affiliated or related companies, sufficient, in the opinion of Publisher, to reimburse Publisher for any contemplated damages, including court costs and attorneys' fees and costs resulting therefrom. Publisher shall advance the costs of litigation, if any, including court costs and attorneys' fees together with any damages which may be paid as a result of the settlement or adjudication of a claim in connection with a musical composition written or composed by Writer. All such costs and damages shall be deemed an advance against any royalties payable to Writer under this or any other agreement between Writer and Publisher. Upon the final adjudication or settlement of each and every claim hereunder, all moneys withheld shall then be disbursed in accordance with the rights of the parties as provided hereinabove.

14. Notices. Any written notice, statement, payment or matter required or desired to be given to Publisher or Writer pursuant to this agreement shall be given by addressing the same to the addresses of the respective parties referred to above, or to such other address as either party may hereafter designate, in writing, to the other party, and on the date when same shall be deposited, so addressed, postage prepaid, in the United States mail, or on the date when delivered, so addressed, toll prepaid, to a telegraph or cable company, or on the date when same shall be delivered to the other party personally or to his duly authorized agent (as designated in writing), such notice shall be deemed to have been duly made pursuant hereto.

15. Entire Agreement. This agreement supersedes any and all prior negotiations, understandings and agreements between the parties hereto with respect to the subject matter hereof. Each of the parties acknowledges and agrees that neither party has made any representations or promises in connection with this agreement or the subject matter hereof not contained herein.

16. Modification, Waiver, Illegality. This agreement may not be canceled, altered, modified, amended or waived, in whole or in part, in any way, except by an instrument in writing signed by both Publisher and Writer. The waiver by Publisher of any breach of this agreement in any one or more instances, shall in no way be construed as a waiver of any subsequent breach (whether or not of a similar nature) of this agreement by Writer. If any part of this agreement shall be held to be void, invalid or unenforceable, it shall not affect the validity of the balance of this agreement. This agreement shall be governed by and construed under the laws and judicial decisions of the State of California.

17. Termination. Publisher shall have the right to terminate this agreement upon thirty (30) days prior written notice.

18. Assignment. Publisher shall have the right to assign this agreement or any of its rights hereunder to any party. This agreement shall inure to the benefit of and be binding upon each of the parties hereto and their respective successors, assigns, heirs, executors, administrators and legal and personal representatives.

19. Definitions. For purposes of this agreement, the word "person" means and refers to any individual, corporation, partnership, association or any other organized group

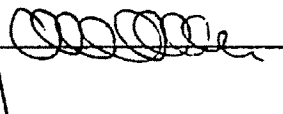
of persons or legal successors or representatives of the foregoing. Whenever the expressions "the term of this agreement" or "period hereof" or words of similar connotation are included herein, they shall be deemed to mean and refer to the original period of this agreement and the period of all renewals, extensions, substitutions or replacements of this agreement, whether expressly indicated or otherwise.

21. Attorneys' Fees. In the event of any action, suit or proceeding by Publisher against Writer under this agreement, in which Publisher shall prevail, Publisher shall be entitled to recover reasonable attorneys' fees and costs of said action, suit or proceeding.

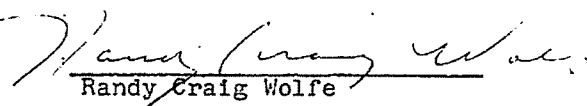
IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the day and year first above written.

"PUBLISHER"
HOLLENBECK MUSIC

By



"WRITER"


Randy Craig Wolfe

Writer's address
for payment of
royalties is:

213 Bay Street

Santa Monica, California

Rider to agreement dated August 29, 1967 by and between HOLLENBECK
MUSIC
and RANDY CRAIG WOLFE

To the extent any of the terms and conditions of this rider are inconsistent with the terms and conditions of the agreement to which this rider is attached, the terms and conditions of this rider shall prevail.

(a) Publisher agrees to abide by the rules and regulations of the Board of Education of the City of Los Angeles and of the Department of Industrial Relations of the State of California, relating to the employment of minors.

(b) No assignment of the agreement between Publisher and you during your minority shall be valid or effective until such assignment has been approved by the Court which approves this agreement.

(c) Upon the occurrence of any one or more of the following events, Publisher may, in its sole discretion, terminate or suspend and extend this agreement by serving written notice upon you, which notice shall specify the election made:

(i) During the time Publisher is complying with the regulations of the Department of Industrial Relations of the State of California, Publisher is prohibited from utilizing your services by any law or by any rule or regulation of the Department of Industrial Relations or other lawful body controlling or regulating the employment of minors.

(ii) In the event you (the songwriter herein) or your parents, or anyone legally acting in your behalf, for a period of sixty (60) days after written notice from Company to bring such proceeding, fail to bring an appropriate proceeding in the Superior Court of the State of California for the County of Los Angeles to secure approval of this agreement.

(iii) In the event you (the songwriter herein) breach any term, condition or covenant of this agreement.

Any suspension hereunder shall commence upon the date specified in the written notice from Publisher, but not earlier than the occurrence of such event. Such suspension shall continue until the cessation of the continuance of the event giving rise to the suspension.

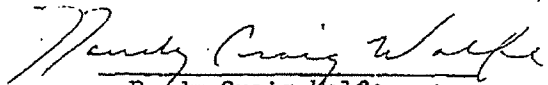
(d) You (the songwriter herein) shall have the right to

audit and inspect the books and records of Publisher solely for the purpose of verifying the accuracy of royalty statements to be rendered hereunder, provided the expense for such audit shall be borne solely by you, and you shall first have given Publisher reasonable advance written notice.

HOLLENBECK MUSIC

By


Low Adler


Randy Craig Wolfe

SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

TRIAL EXHIBIT 2092

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PLANT AND JOHN PAUL JONES

*Michael Skidmore, etc.*vs. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-1

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____
Depury Clerk

LAWRENCE FERRARA, Ph.D.
LAWRENCE FERRARA, INC.
MUSIC ANALYSIS

REPORT REGARDING

"TAURUS" BY RANDY CALIFORNIA

AND

"STAIRWAY TO HEAVEN" BY JIMMY PAGE AND ROBERT PLANT

I. INTRODUCTION

1. My faculty rank at New York University is Professor of Music, and my title is Director Emeritus of all studies (B.M. through Ph.D.) in Music and the Performing Arts in New York University's Steinhardt School. I have written and co-written published books and articles (in peer reviewed journals) regarding music analysis, methodologies in music research, and other scholarly areas related to music. I sit on editorial boards of peer-reviewed journals. I have provided analyses and opinions in connection with music copyright issues for more than 20 years. My *curriculum vitae* is attached as **Appendix 1**.

2. I have been asked to complete a comparative musicological analysis of the musical compositions in (1) "Taurus" written by Randy California and (2) "Stairway to Heaven" written by Jimmy Page and Robert Plant (hereafter "Stairway"). Included in the body of this report are the results of my comparative musicological analysis of the compositions embodied in the U.S. Copyright Office Deposit Copy of "Taurus" and the "Stairway" sound recording as recorded by Led Zeppelin. Various attachments and exhibits are referenced in and part of this report and accompany it.

3. It is my understanding that "Taurus" was copyrighted in December 1967, and a recording of that composition was released on the album, *Spirit*, in January 1968 (attached as Track 1 on **Audio Exhibit 1**). It is also my understanding that "Stairway" was recorded in the period December 1970 to January 1971 and released in November 1971 on the album, *Led Zeppelin IV*.

Materials Used in the Analysis

4. The following materials were used in my analysis set forth below: (1) a copy of the U.S. Copyright Office Deposit Copy of "Taurus", which is stamped with the date, Dec 22, 1967, and the copyright # Eu 35222 (attached as **Visual Exhibit A**); (2) an mp3 of "Stairway" (attached as Track 2 on **Audio Exhibit 1**); (3) a 29-page transcription of all of the parts in the entirety of the musical composition embodied in the "Stairway" sound recording (attached as **Visual Exhibit B**); (4) published sheet music of "Stairway" (attached as **Visual Exhibit C**); (5) sound recordings and published sheet music of related musical works attached as visual and audio exhibits; and (6) related books and articles.

Overall Methodology

5. I compared "Taurus" and "Stairway" by using this overall methodology: (1) reviewing the musical compositions in their entirety, (2) reviewing and comparing each of their component elements individually and in combination, (3) reviewing related music, and (4) once again reviewing "Taurus" and "Stairway" in their entirety within the context of the analysis of their component parts and related music.

Musical Compositions and Basic Terminology

6. A musical composition is composed of certain distinct and identifiable elements that can be analyzed separately, and in combination. When analyzing two compositions in order to form an opinion in music copyright infringement claims, some elements are more fundamental to determining similarities or differences than others, namely: (1) structure; (2) harmony; (3)

rhythm; and (4) melody, and when present, (5) lyrics.¹ On the other hand, similarities or differences in the key (e.g., if two compositions are in the same key or in different keys), tempo (i.e., how fast or slow), meter (e.g., 4/4 time), instrumentation (e.g., the use of guitars, drums, synthesizers, etc.), and style or genre (e.g., hip hop, country, etc.) are less significant insofar as they represent musical building blocks and/or commonplace practices used in countless musical compositions. Brief definitions of the five enumerated elements listed above follow.

(a) **Structure** is the organization of musical units or musical groups, often dictated by the development of the melody and/or lyrics. The larger portions or sections of *songs* (i.e., works that include the human voice singing a text) are generally referred to as Verses and Choruses. The larger portions or sections of *instrumental* works (i.e., works that do not include the human voice singing a text) are generally referred to as Section A, Section B, Section C, etc. The material within Verses and Choruses and Sections consists of phrases.

(b) **Harmony** refers to the tonal relationship of pitches that sound simultaneously, especially (but not exclusively) with respect to the use and organization of “chords.” A “triad” is a particular type of chord consisting of three pitches – the “root” or name of the chord and pitches that are respectively a third and a fifth above the root --

¹ For example, Ronald S. Rosen writes: “Thus, from the copyright perspective (and in the view of many musical professionals)... the basic elements of music are: melody, harmony, rhythm, and form/structure.” (Ronald S. Rosen, *Music and Copyright*, Oxford University Press, 2008, p. 156) In addition and as cited in Rosen (footnote 19 on page 156): “In *Tisi v. Patrick*, both experts were in agreement “that the elements to be considered on the question of similarity between [the two songs] were structure, melody, harmony and rhythm.” 97 F.Supp.2d 539,543 (S.D.N.Y.2000).”

built on intervals of a third.² (An interval names the number of tones or space between two pitches.) A sequence of chords is referred to as a harmonic progression. Harmonic rhythm is the rate of change of chords.³ An “arpeggio” is a chord in which its individual pitches are in played succession, not simultaneously. An arpeggio is a commonplace musical device that has existed for centuries.

(c) **Rhythm** refers to the pattern and organization of the time values of sounds and silences as well as the overall rhythmic flow and feel in musical time.⁴

(d) **Melody** is a single line of music that consists primarily of a succession (i.e., a sequence) of pitches and the rhythmic durations of those pitches within a melodic phrase structure. Pitch is the specific high or low placement of a musical sound, often identified within a musical scale.⁵

(e) **Lyrics** are the words (or text) that are sung in a song.

II. FINDINGS REGARDING “TAURUS” AND “STAIRWAY”

7. The similarities between “Taurus” and “Stairway” are limited to three measures in “Stairway” (around 9 seconds in the “Stairway” sound recording) that are iterated six times in “Stairway” for a total of eighteen measures. Most of the notes in these repeating three measures in “Stairway” are

² See “harmony” in *The Harvard Dictionary of Music* (p. 379) and *The New Grove Dictionary of Music and Musicians* (Second Edition, 2001, Vol. 10, p. 858).

³ See “harmonic rhythm”, *ibid.* (*Harvard*, p. 376), (*Grove*, Vol. 10, 854).

⁴ See “rhythm”, *ibid.* (*Harvard*, p. 723), (*Grove*, Vol. 21, p. 277).

⁵ See “melody”, *ibid.* (*Harvard*, p. 499), (*Grove*, Vol. 16, p. 363).

different from “Taurus”, and the similarity is merely the result of a commonplace descending scale of pitches, a fundamental musical building block widely used in chord progressions in popular music prior to “Taurus”, used in classical music as early as the 17th century, and so common that they are sometimes referred to as a “minor line cliché”. Similar chord progressions with such descending pitches appear in prior compositions such as, for example, “Dido’s Lament” by Henry Purcell (1689), “My Funny Valentine”, “A Taste of Honey”, “Cry Me a River”, “Michelle”, “The Meaning of the Blues”, “How Insensitive”, “Walkin’ My Baby Back Home”, “More”, and “Chim Chim Cher-ee” (from *Mary Poppins*).

8. On the basis of my research and analysis, I found that the similarities between “Taurus” and “Stairway” are a result of their creators having drawn upon commonly and widely used musical practices in well-known compositions that predate “Taurus”, including as played on the guitar (which is the case in “Stairway”). Moreover, there are substantial differences between “Taurus” and “Stairway” that far exceed the minimal similarities between them.

II. A. THERE ARE NO SIGNIFICANT STRUCTURAL SIMILARITIES

9. Looking at each compositional element (see Paragraph 6 above) of “Taurus” and “Stairway,” first, there are no significant structural similarities between “Taurus” and “Stairway”, but there are significant structural differences. For example, “Stairway” includes Introduction, Interlude, Bridge, and Guitar Solo sections but “Taurus” does not. “Taurus” has two sections, A and B, which interchange like the interchange between Verses and Refrains, but there no actual Verses or Refrains in “Taurus”. My analysis of the structures of the two compositions appears in **Attachment A – Analysis of Structure**.

II. B. THERE ARE NO SIGNIFICANT HARMONIC SIMILARITIES

10. There are no significant harmonic similarities, but there are significant harmonic differences. The harmonic similarities that do exist in the repeating *three measures* in “Stairway” and Section A in “Taurus” are

insubstantial and were in common use prior to “Taurus”. Moreover, the chord progressions in the remaining portions of “Stairway” are different from the chord progressions in “Taurus”. Thus, any harmonic similarities to “Taurus” in “Stairway” are heard within an overall context of significant harmonic differences.

11. The harmonic similarities between “Taurus” and “Stairway” are limited to the first three measures of a four-measure chord progression and are the result of a commonplace descending line of notes within the respective chord progressions and the chords that flow from that descending line of notes. The arpeggiated notes in the four-measure chord progressions in “Taurus” and “Stairway” are in a different order, and there is no arpeggiation at all in the corresponding measure 3 in “Taurus”. Thus, while these chords in “Taurus” and “Stairway” are arpeggiated, (1) arpeggios are a centuries-old and commonplace musical device, and (2) the notes in these arpeggios are in a different sequence or order in “Taurus” and “Stairway”.

12. Notes within the chord progressions under analysis in “Taurus” and “Stairway” move down a chromatic scale.⁶ Such chromatic scales in chord progressions are commonly used in popular music prior to “Taurus”, used in classical music as early as the 17th century, and so common that they are sometimes referred to as a “minor line cliché”. Similar chord progressions with descending chromatic scales in sixteen works that predate “Taurus” are analyzed as part of the analysis of harmonies in “Taurus” and “Stairway” in **Attachment B – Analysis of Harmony** and as part of the analysis of melodies in “Taurus” and “Stairway” in **Attachment C – Analysis of Melody**.

⁶ A “chromatic scale” is a scale in which each pitch is separated from its neighbors by a semitone, the smallest interval in the Western tonal system. See “scale” in *The Harvard Dictionary of Music*, p. 757.

II. C. THERE ARE NO SIGNIFICANT RHYTHMIC SIMILARITIES

13. There are no significant rhythmic similarities between “Taurus” and “Stairway”, but there are significant rhythmic differences. The overall rhythms are very different. For example, the tempo at the beginning of “Stairway” is 72 beats per minute, but it gradually and significantly increases from 72 beats per minute during the Introduction to 102 beats per minute by Verse 6. The incremental acceleration of the tempo and increase in the rhythmic complexity is a hallmark of the overall rhythmic feel and flow of “Stairway”. “Taurus” does not include an indication of the tempo. Moreover, the composition embodied in “Taurus” does not remotely include the developing rhythmic complexity in “Stairway” as analyzed in **Attachment C – Analysis of Rhythm**.

II. D. THERE ARE NO SIGNIFICANT MELODIC SIMILARITIES

14. There are no significant melodic similarities, but there are significant melodic differences. Most of the melodies throughout “Stairway” are very different from the melodies in “Taurus”. A minimal melodic similarity between “Taurus” and the 3-measure portion in “Stairway” is the chromatic descending line from the pitches “a” to “f” in measures 1, 2 and 3 in the four-measure chord progressions discussed above, and analyzed in **Attachment B - Harmony**. First, this minimal melodic similarity is the result of the use of descending line chord progressions which were widely used in popular music prior to “Taurus”, and used in classical music as early as the 17th century. The lowest pitches in the first three measures of the four-measure chord progressions in “Taurus” and “Stairway” simply move down the chromatic scale.

15. Second, this total of five notes from the note “a” down to “f”, consists of simply playing an “a” on a piano and then playing each neighboring key to the left through an “f”, a total of five neighboring keys. This minimal portion of a scale is a fundamental musical building block. Moreover, the rhythmic durations of four of the five descending chromatic notes are *different* in “Taurus” and “Stairway”. There is nothing remotely creative about the similarity

of five chromatic descending notes (four of which that have *different* rhythmic durations) in “Taurus” and “Stairway”.

16. Third, the melodies created by arpeggiating the chords under study are significantly *different* in “Taurus” and “Stairway”. The succession or order of the notes in these arpeggios is very *different* in “Taurus” and “Stairway”, thereby creating very different *melodies* in “Taurus” and “Stairway”. Indeed, the two-note phrases in the upper melodic line in the guitar arpeggios in “Stairway” are the most creative and memorable part in the repeating 3-measures in the Introduction in “Stairway”; that upper melodic line is absent in “Taurus”. What is similar to “Taurus”, a descending chromatic line, is a commonly used musical building block.

17. Fourth, any minimal melodic similarities in “Taurus” and the guitar part in “Stairway” are found in *guitar* parts in prior art. As analyzed and transcribed in Musical Examples 11 – 19 in **Attachment D**, *guitar* parts in six (6) works that predate “Taurus” include melodic similarities that are found in “Taurus” and “Stairway”. Moreover, greater melodic similarities are found between “Music to Watch Girls By”, and/or “Summer Rain” and “Taurus” than exist between the melodies in “Taurus” and “Stairway”. An analysis of the melody in “Taurus” and “Stairway” within the context of prior art is in **Attachment D – Melody**.

II. E. “TAURUS” AND “STAIRWAY” ARE VERY DIFFERENT COMPOSITIONS IN THEIR ENTIRETIES

18. “Taurus” and “Stairway” are very different compositions in their entireties. With respect to the two works as a whole, there are no significant structural, harmonic, rhythmic, and/or melodic differences, but there are significant structural, harmonic, rhythmic, and melodic differences. Moreover,

“Stairway” is a “song” with a singing voice and a very meaningful text (lyrics). “Taurus” does not include any portion to be sung, nor does it include any lyrics.⁷

19. The overall compositional trajectory of “Stairway” is marked by an unremitting increase in musical texture⁸ and in compositional complexity that develops throughout the song. The expansion of the musical texture and compositional complexity in “Stairway” develops in parallel with an acceleration of the tempo, i.e., the speed of the basic pulse, climaxing in the Verse section (which begins at 6:45). The overall compositional trajectory in “Taurus” is not remotely similar. Instead, “Taurus” is marked by an internal sameness and congruity between its sections without any comparable compositional climax.

20. The musical and lyrical compositions in “Stairway” are indelibly bound within the “Stairway” composition, and develop together throughout the “Stairway” composition. There are no lyrics in “Taurus”. My analysis of the two compositions as a whole appears in **Attachment E – “Taurus” and “Stairway” in their entirety**.

II. F. VALUE ASSESSMENT OF THE MUSIC IN “STAIRWAY” THAT IS SIMILAR TO “TAURUS”

21. On the basis of a quantitative analysis, 2.23% of the music in “Stairway” embodies music that is similar, although not meaningfully similar, to

⁷ A “song” is: “A form of musical expression in which the human voice has the principal role and is the carrier of a text; as a generic term, any music that is sung....” *The Harvard Dictionary of Music*, Fourth Edition, Harvard University Press, 2003, p. 203.

⁸ “Texture” is being used here in terms of “spacing”, “orchestration”, and rhythm. (See “Texture” in *The Harvard Dictionary of Music*, p. 877.) “Spacing” is the high or low placement of the notes in a chord. (*Ibid.*, p. 834) and “orchestration” refers to “The art of employing instruments in various combinations....” (*Ibid.*, p. 597.)

“Taurus”. On the basis of a qualitative analysis, there are qualitative grounds for *increasing* the 2.23% quantitative value of the descending line of notes in “Stairway” that is similar to “Taurus”. However; this 2.23% of music in “Stairway” does not include the *lyrical composition*; the analysis herein does not quantify the *lyrical composition*. The lyrics in “Stairway” constitute a substantial portion of the overall composition. Thus, the quantitative measurement of 2.23% represents *only 2.23%* of the *musical composition* in “Stairway” with similarities to “Taurus”, *not* the whole (musical *and* lyrical) “Stairway” composition. My quantitative and qualitative analysis of the music in “Stairway” that is similar to “Taurus” is in **Attachment F – Value Assessment**.

IV. CONCLUSIONS

22. On the basis of my musicological analysis, it is my opinion that the compositions in “Taurus” and “Stairway” do not share any significant structural, harmonic, rhythmic, or melodic similarities, individually or in the aggregate. Any similarities between “Taurus” and “Stairway” are insubstantial, and represent musical practices that were in common use prior to “Taurus”.

23. On the basis of my musicological analysis, I found that the similarities between “Taurus” and “Stairway” are a result of their creators having drawn upon commonly and widely used musical practices in well-known compositions, including as played on the guitar. Moreover, the substantial differences between “Taurus” and “Stairway” far exceed any similarities between them.

24. The similarities between “Taurus” and “Stairway” are limited to a descending line of notes and widely used chord progressions which appear in three measures in “Stairway” (around 9 seconds in the “Stairway” sound recording) that are iterated six times in “Stairway” for a total of eighteen measures. However, the chord progressions and the melodies in “Taurus” and in

those three measures in “Stairway” are not the same, and similarities are commonly found in works that predate “Taurus”. The two-note phrases in the upper melodic line in the guitar arpeggios in “Stairway” are the most creative and memorable part in those three measures in the Introduction in “Stairway”; that upper melodic line is absent in “Taurus”. What is similar to “Taurus”, a descending chromatic line, is a commonly used musical building block.

25. The overall compositional trajectory of “Stairway” is marked by an unrelenting increase in musical texture and in compositional complexity that develops throughout the song. The expansion of the musical texture and compositional complexity in “Stairway” runs in parallel with an acceleration of the tempo, i.e., the speed of the basic pulse, climaxing in Verse 6 (which begins at 6:45). The overall compositional trajectory in “Taurus” is not remotely similar, and is marked by an internal sameness and congruity between its sections (e.g., Section A1 compared with Section A2 in “Taurus”) and without any comparable compositional climax. Moreover, “Stairway” is a “song” with a vocal melody line and a text (lyrics). “Taurus” is not a “song”; it does not indicate any vocal melody nor does it include any lyrics.

26. On the basis of a quantitative analysis, 2.23% of the *music* in “Stairway” embodies similarities to both versions of “Taurus”. On the basis of a qualitative analysis, there are qualitative grounds for *increasing* the 2.23% quantitative value of the music in “Stairway” that is similar to “Taurus”. However, this 2.23% of music in “Stairway” does not include the *lyrical* composition. The lyrics in “Stairway” constitute a substantial portion of the overall composition. Thus, the quantitative measurement of 2.23% represents *only* 2.23% of the *musical composition* in “Stairway” with similarities to both versions of “Taurus”, *not* the whole (musical *and* lyrical) “Stairway” composition.

27. Insofar as any similarities between “Taurus” and “Stairway” are insubstantial and represent musical practices that were in common use prior to “Taurus”, it is my professional opinion that there is no *musicological* support for a claim that “Stairway” infringes the music copyright of “Taurus”.

Respectfully submitted,

February 10, 2016

By: Lawrence Ferrara, Ph.D.

A handwritten signature in black ink, appearing to read "Lawrence Ferrara", is written over a horizontal line. The signature is stylized with a large, loopy initial "L" and a trailing flourish.

CASE NO. Case No. 2:15-cv-03462

*Michael Skidmore, etc.*VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-2

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____ Deputy Clerk

FERRARA REPORT**ATTACHMENT A – ANALYSIS OF STRUCTURE****A. 1. THERE ARE NO SIGNIFICANT STRUCTURAL SIMILARITIES;
BUT THERE ARE SIGNIFICANT STRUCTURAL DIFFERENCES**

1. I found that there are no significant structural similarities between “Taurus” and “Stairway”, but there are significant structural differences.

2. A structural chart provides a map of the structural sections in a musical composition. The charts of the respective structures in “Taurus” and “Stairway” immediately below include the number of measures (mm.) in each structural section. The commencement time of each section in the “Stairway” sound recording is also provided.

“TAURUS”

Section A1	(16 mm.)
Section B1	(9 mm.)
Section A2	(8 mm.)
Section B2	(9 mm.)
Coda	(1 meas.)

“STAIRWAY”

0:00	Intro	(16 mm.)
0:54	Verse 1	(20 mm.)
2:01	Interlude	(4 mm.)
2:14	Refrain 1	(8 mm.)
2:40	Verse 2	(9 mm.)
3:07	Refrain 2	(8 mm.)
3:30	Verse 3	(9 mm.)
3:57	Refrain 3	(8 mm.)
4:20	Verse 4	(9 mm.)
4:45	Refrain 4	(8 mm.)
5:08	Verse 5	(10 mm.)
5:35	Bridge	(8 mm.)
5:56	Gtr. Solo	(20 mm.)
6:45	Verse 6	(18 mm.)
7:27	Outro	(11 mm.)
(ends at 8:02)		

A. 2. THE OVERALL STRUCTURES ARE VERY DIFFERENT

3. The overall structures in “Taurus” and “Stairway” are very different, as illustrated in the structural charts immediately above. “Stairway” includes Introduction, Interlude, Bridge, and Guitar Solo sections but “Taurus” does not. The interchange of Sections A and Sections B in “Taurus” is loosely analogous to the interchange of Verses and Refrains in “Stairway”. However, such an interchange is generic in songs in popular music and is a basic structural building block in music. Thus, any scant similarity in the overall structures represents common practices that are generic in popular music and are structural building blocks in music more generally.

4. In terms of their overall structures, there are four Refrains and six Verses in “Stairway”, but there are two iterations of Section A (i.e., Sections A1 and A2) and two iterations of Section B (i.e., Sections B1 and B2) in “Taurus”. In addition, the interchange between Verse 1 and Refrain 1 in “Stairway” is interrupted by an “Interlude” section, but this is not the case in the interchanges between Sections A and B in “Taurus”.¹

5. “Taurus” has a repeat sign at the end of Section A1 (the repeat sign consists of two long vertical lines extending through two staves, and two dots to the left of those two long vertical lines on each staff). This sign denotes a repeat of the first 8 measures. Therefore, Section A1 is 16 measures in duration consisting of the 8 measures that are notated and their immediate repeat. Section B1 follows Section A1 and continues to the bottom of the page whereupon the sign, “Da Capo” is marked. “Da Capo” translates from the Italian as “the head”, which means to return to the beginning of the composition. Generally, any internal repeat signs are omitted during a “Da Capo”.² On that basis, Section A2 does not include a repeat and is therefore 8 (not 16) measures. Section A2 is followed by Section B2, and the final measure of “Taurus” is marked “Coda”.

¹ The second page in **Visual Exhibit A** is a copy of “Taurus” on which the names of the structural sections are hand-written.

² See “Da capo” in *The Harvard Dictionary of Music*, p. 234.

A. 3. THE SIMILARITY IS LIMITED TO THREE MEASURES THAT REPEAT

6. On the basis of my analysis of “Taurus” and “Stairway”, I found that the similarities between “Taurus” and “Stairway” are limited to three measures in “Stairway” (around 9 seconds in the “Stairway” sound recording) that are iterated six times in “Stairway” for a total of eighteen measures.

7. The portions of “Taurus” with similarities to “Stairway” are Sections A1 and A2 (see the second page in **Visual Exhibit A** and the analysis below). As demonstrated later in this report, the harmonic similarity represents practices that were in common use prior to “Taurus”. As to the melodies during these three measures, the pitch sequences are largely different, and any similarity is largely the result of the chord progressions (*i.e.*, the harmonic similarity).

8. The portions of “Stairway” with similarities to “Taurus” are in the:

Introduction from 0:00 – 0:09 and 0:13 – 0:22 (see mm. 1 – 3 and 5 – 7 in **Visual Exhibit B**);

Verse 1 from 0:54 – 1:03; 1:07 – 1:16; and 1:47 – 1:56 (see mm. 17 – 19, 21 – 23, and 33 – 35 in **Visual Exhibit B**); and

Interlude from 2:01 – 2:10 *in varied form* (see mm. 37 – 39 in **Visual Exhibit B**).

Thus, ten measures out of a total of sixteen measures in the Introduction in “Stairway” (measures 4 and 8 – 16) do *not* include similarities to “Taurus”, measures 20 and 24 – 32 in Verse 1 in “Stairway” do *not* include similarities to “Taurus”, and measures 40 – 166 (which include Verses 2 – 6, Refrains 1 - 4, the Bridge, the Guitar Solo, and the Outro sections from 2:14 – 8:01), do *not* include similarities to “Taurus”.

9. In summary, on the basis of my analysis I found that any structural similarities between “Taurus” and “Stairway” are insignificant, but there are significant structural differences. In addition, I found that 18 measures out of a total of 166

measures in “Stairway” contain similarities to “Taurus”.³ These 18 measures in “Stairway” consist of six iterations of the three measures discussed above, and that change as a result of notes played by added instruments as transcribed in **Visual Exhibit B**. The harmonic similarity in these measures represents practices that were in common use prior to “Taurus”. As to the melodies during these three measures, the pitch sequences are very different, and any minimal similarity is largely the result of the chord progressions (i.e., the harmonic similarity).

³ As analyzed above, I also found that 18 out of a total of 43 measures in “Taurus” contain similarities to “Stairway”.

FERRARA REPORT**ATTACHMENT B – ANALYSIS OF HARMONY****B. 1. THERE ARE NO SIGNIFICANT HARMONIC SIMILARITIES B
THERE ARE SIGNIFICANT HARMONIC DIFFERENCES**

1. I found that there are no significant harmonic similarities between “Taurus” and “Stairway”, but there are significant harmonic differences. One of the differences is that the note values in “Taurus” are twice as long as corresponding notes in “Stairway”. For example, a corresponding quarter note in “Stairway” is an eighth note in “Taurus”. On that basis, I created a transcription in which I copied all eight measures in Section A in “Taurus”, but I halved the value of those notes thereby creating a transcription of Section A that embodies every note in four, not eight, measures. This halving of the value of the notes facilitates a comparative transcription of the respective portions of “Stairway” and “Taurus” that share similarities as illustrated in Musical Example 1 below, and is in keeping with musicological practices.

**B. 2. THE HARMONIC SIMILARITY IS LIMITED TO THREE MEASURES
THAT REPEAT**

2. In Musical Example 1 below, the note values in Section A in “Taurus” are halved (8 measures becomes 4 measures but with all internal rhythmic relationships maintained exactly) and transcribed with chord symbols.¹ Those 4 measures in “Taurus” are placed over measures 1-4 in “Stairway”. The harmonic similarity between “Taurus” and “Stairway” is limited to the first three measures of a four-measure chord progression that is not the same in the two works. Moreover, the harmonic similarity is largely the result of a commonplace descending line of notes within the respective chord progressions. That descending line of notes is highlighted in red in Musical Example 1 below.

¹ In keeping with musicological practices, in some cases chord symbols depict implied chords such as when the root and the third of the chord are present, but the fifth of the chord is not.

3. The four-measure chord progression in “Taurus” (identified in Musical Example 1 by chord symbols placed above the measures) is contiguously iterated two times in Section A1 and iterated one time in Section A2. The four-measure chord progression in “Stairway” is also identified by chord symbols placed above the measures in Musical Example 1, and is iterated two times in the Introduction, three times in Verse 1, and one time in the Interlude. Starting with the second iteration of the four-measure chord progression in “Stairway”, the addition of the recorders embodies notes that alter the harmony as compared with the first iteration which is played on acoustic guitar alone through measure 3.

MUSICAL EXAMPLE 1

Four-measure chord progressions

Top two lines = Section A in “Taurus” with note values halved

Lower two lines = Measures 1-4 in “Stairway”

Am Ab⁺ (G^{#+}) C/G Gb⁹⁷ (F^{#97}) N.C. A⁵

Am G^{#+} C/G D/F[#] Fmaj⁷ G/B Am

4. The four-measure chord progressions in “Taurus” and “Stairway” are charted immediately below.² Notably, the chord progression in the second half of the

² Chord symbols without a slash (“/”) after a letter are in “root” position in which the name of the chord is the lowest note. (The lowest note of a chord is sometimes termed the “bass” note although this does *not* have to actually be played on a bass.) Chords symbols with a slash (“/”) are *not* in “root” position. Instead, the lowest note is the note

Introduction in “Stairway” is different, starting with the “C” chord in measure 9 and continuing through the “Fmaj7” chord in measure 16 (as illustrated in **Visual Exhibit B**) and does not embody similarities to the chord progression in “Taurus”.

	<u>1st measure</u>		<u>2nd measure</u>	
“Taurus” D.C.:	Am	G#+	C/G	F#ø7
“Stairway”:	Am	G#+	C/G	D/F#
	<u>3rd measure</u>		<u>4th measure</u>	
“Taurus” D.C.:	(F in bass but no chord)		(D in bass, no chord)	A5
“Stairway”:	Fmaj7		G/B	Am

5. Looking at the chord progressions charted above, the main similarity occurs in the first three measures of each four-measure chord progression. “Taurus” and “Stairway” start with “Am” chords (see the 1st measure). The second chord in the 1st measure is also the same, “G#+”. In addition, while there is no “a” pitch in the second chord in “Stairway”, the establishment of the key of A minor in the first chord provides a strong “Am” harmonic context for the “G#+” chord.

6. Moving to the 2nd measure, the “C/G” chord is the same in “Taurus” and “Stairway”. However, in four of the six iterations of the four measure chord progression in “Stairway”, the addition of notes played on the recorders changes the “C/G” chord to “Am7/G”, which includes the three pitches in a “C/G” chord but is not the *same* chord. The “Am7/G” chord continues the strong “Am” harmonic context for the first three chords in “Stairway”, but not in “Taurus”. The “F#ø7” in “Taurus” and the “D/F#” chord in “Stairway” share the “f#” note as the lowest note of the chord and an “a” along with the “d” in the upper line in “Taurus”, but the roots of the respective chords are different.

after the slash. A “ø7” sign symbolizes the lowering of third and fifth of the chord by a half step each.

7. The main harmonic similarity ends in the 2nd measure. There is no chord in the 3rd measure in "Taurus", but it does have an "f" as the lowest note which is the lowest pitch in the "Fmaj7" chord in "Stairway". Above the "f" in "Taurus" is a "trilled" "b" consisting of a rapid oscillation between the notes "b" and "c". By way of significant difference, the three pitches above the "f" in the "Fmaj7" chord in "Stairway" are not in the 3rd measure in "Taurus". Thus, there is only a *very slight* harmonic similarity between the 3rd measure in "Taurus" and the 3rd measure in "Stairway", because there is no chord in the 3rd measure in "Taurus".

8. There is no chord in the first two beats in the 4th measure in "Taurus", there is only a "d" note. By contrast, the first chord in the 4th measure in "Stairway" is "G/B", which is very different. On the other hand, the "A5" harmony that follows in the 4th measure in "Taurus" is similar to the "Am" chord that ends the 4th measure in "Stairway". Nonetheless, respective 4th measures in "Taurus" and "Stairway" are harmonically different.

9. The harmonic rhythm (i.e., rate of change in the chords) is the same in the respective first three measures and different in the respective 4th measure in which the "A5" chord in "Taurus" occurs on beat 3, but the "Am" chord in "Stairway" occurs earlier on the second half of beat 1.

10. The similarities and differences identified above between the 1st through the 4th measures in "Taurus" and "Stairway" are the same in the contiguous repeat of those measures with the exception of the 6th measure in which there is an "Am7/G" in "Stairway", not "C/G". Notably, the "Am7/G" is the third chord in "Stairway" in four of the six iterations of the chord progression under study in "Stairway". In these four iterations, only 2 out of 7 chords in the four-measure chord progression in "Stairway" are the same as the chords in Section A in "Taurus". In the first iteration of the four-measure chord progression and in one other iteration in "Stairway", only 3 out of 7 chords in "Stairway" are the same as the chords in Section A in "Taurus" due to the "C/G" chord.

B. 3. THE HARMONIC SIMILARITY RESULTS LARGELY FROM
A COMMONLY USED DESCENDING LINE

11. Similarities in the four-measure chord progressions in “Taurus” and “Stairway” are found in chord progressions in popular music prior to “Taurus”, used in classical music as early as the 17th century, and so common that they are sometimes referred to as a “minor line cliché”. The lowest notes in the first three measures in the chord progressions under analysis in “Taurus” and “Stairway” move down the chromatic scale.³ This is illustrated in Musical Example 1 above. Therein, the descending chromatic notes, highlighted in red and only in the first three measures, start on scale degree 1 (an “a” pitch) and descend in half steps (i.e., chromatically) to scale degree 6 (an “f” pitch).

12. This chromatic descending line movement within a chord progression is common.⁴ A very famous example is the chromatic descending line chord progression in “When I Am Laid in Earth” (also known as “Dido’s Lament”) from Henry Purcell’s opera, *Dido and Aeneas* (1689).⁵ The published sheet music of “When I Am Laid in Earth” (hereafter, “Dido’s Lament”) is attached as **Visual Exhibit D**. A descending line

³ A “chromatic scale” is a scale in which each pitch is separated from its neighbors by a semitone, the smallest interval in the Western tonal system. See “Scale” in *The Harvard Dictionary of Music*, Fourth Edition, Harvard University Press, 2003, p. 757.

⁴ For example, see Richard J. Scott, *Chord Progressions for Songwriters* (Writers Club Press, New York, 2003, pp. 181, 189-191, and 195-198). A descending line movement in half-steps within a chord progression is, in some instances, termed a “line cliché”. (See Randy Felts, *Reharmonization*, Berklee Press, 2002, Chapter Eleven titled “Line Clichés”, pp. 105-112.) These “line cliché” minor chord progressions are also known as “CESH”, i.e., contrapuntal elaboration of static harmony. (For example, see (1) Robert Rawlins and Nor Eddine Bahha, *Jazzology: The Encyclopedia of Jazz Theory for All Musicians*, Hal Leonard Corp., 2005, pp. 108-110, (2) Jerry Coker, *Elements of the Jazz Language for the Developing Improvisor*, Alfred Publishing Co., 1991, Chapter 10 titled “CESH”, pp. 61-67, and (3) Jerry Coker, *Keyboard For Pianists and Non-Pianists*, Belwin Mills Publishing Corp., 1991, pp. 41-45.) Indeed, John A. Elliott writes that another term for CESH is “line cliché” in his *Insights in Jazz: An Inside View of Jazz Standard Chord Progressions* (Jazzwise Publications, 2009).

⁵ *The Harvard Dictionary of Music*, pp. 241 and see “Lamento” on page 452.

chord progression occurs several times in this famous song, including with contiguous repeats. The first four measures of the first iteration of the descending line chord progression in “Dido’s Lament” from the published sheet music is transcribed in Musical Example 2 below.

MUSICAL EXAMPLE 2

“Dido’s Lament”

The musical example transcribes the first eight measures of the first iteration of the descending line chord progression in “Dido’s Lament”. The music is in 3/4 time and A minor. The first system shows measures 1-4 with lyrics “When I am laid am”. The second system shows measures 5-8 with lyrics “laid in earth, may my”. Chords are indicated above the vocal line: Am, E7(b13)/G#, E7/G#, A7/G, 3 D(add2)/F#, D6/F#, Dm(411)/F, E7, and Am/C.

13. The descending chromatic notes in the chord progression in “Dido’s Lament” transcribed in Musical Example 2 are highlighted in red, as they are in Musical Example 1 in the excerpts from “Taurus” and “Stairway”.⁶ Like “Taurus” and “Stairway”, the descending chromatic line chord progression in “Dido’s Lament” starts on scale

⁶ In keeping with musicological practices, all of the transcriptions of works in minor keys are presented in the key of A minor to facilitate comparisons.

degree 1 (an “a” pitch) and descends in half steps (i.e., the descent is chromatic). The descent in “Dido’s Lament” has an additional note descending to scale degree 5 (an “e” pitch). Chord symbols have been added in Musical Example 2 based on contemporary chord symbol analysis practices.

14. As is the case between the chromatic descending line chord progressions in “Taurus” and “Stairway”, the descending line chord progression in “Dido’s Lament” has *similarities and differences* with “Taurus” and “Stairway” such as:

- The first chord in “Dido’s Lament” is “Am” which is the same as in “Taurus” and “Stairway”;
- The second chord in “Dido’s Lament” is an “E7(b13)/G#” chord with “g#” as the lowest note and includes all of the pitches in the “G#+” chord in “Taurus” and “Stairway”, but the extension of the second chord in “Dido’s Lament” is “E7/G#” which drops the “(b13)” and is thereby one pitch less similar to the respective second chord in “Taurus” and “Stairway”;
- The respective third chords in “Taurus”, “Stairway”, and “Dido’s Lament” have “g” as the lowest pitch, and two of the three pitches in the third chord in “Stairway” and “Taurus” are in the third chord in “Dido’s Lament”, but the root of the chord is different;
- The “f#” as the lowest pitch is the same as the lowest pitch in the respective fourth chords in “Taurus” and “Stairway”, and the fourth chord in “Dido’s Lament”, “D” chord (and an added “2” or “6”) all three pitches in the corresponding “D/F#” in “Stairway”;
- The fifth chord in “Dido’s Lament”, “Dm(#11)/F”, shares two pitches with “Fmaj7” in “Stairway” (whereas “Stairway” and “Taurus” only share one pitch), and the lowest pitch (“f”) is the same in “Dido’s Lament”, “Taurus” and “Stairway”; and
- The meter in “Dido’s Lament” (3/2) and the harmonic rhythm are different from the meter and harmonic rhythm in “Taurus” or “Stairway”.

15. The use of a repeating chord progression distinguished by descending bass notes in “Dido’s Lament” can also be found in other operas in the 17th century.

According to *The Harvard Dictionary of Music*, a descending bass line device was also practiced in the mid-17th century Italian operas of Venice.⁷

16. Another very well known example of a chromatic descending line within a chord progression in classical music is “Prelude in E minor” Opus 28 by Frederic Chopin (1839).⁸ The published sheet music is attached as **Visual Exhibit E** on which the descending notes are identified by hand-written circles. The hand-written circles illustrate the parallel chromatic descents in (1) the upper notes of the chords (which start on scale degree 1 and descend chromatically through scale degree 5), and the lowest notes of the chords (which start on scale degree 3 and descend chromatically through scale degree 7).

17. There are many examples of popular songs with chromatic descending line chord progressions that predate “Taurus”. For example, the 1957 Julie London recording of “The Meaning of the Blues” (attached as Track 3 on **Audio Exhibit 1**) includes a descending line chord progression. Written in a minor key, the chord progression is transcribed in Musical Example 3 below. The notes in the chromatically descending line are highlighted in red. Like “Taurus” and “Stairway”, the descending line in the four-measure chord progression in “The Meaning of the Blues” starts on scale degree 1 (an “a” pitch) and descends in half steps (i.e., chromatically) to scale degree 6 (an “f” pitch).

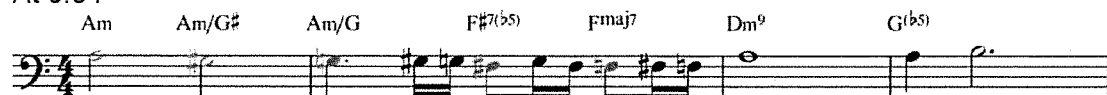
⁷ *The Harvard Dictionary of Music*, see “Lamento”, p. 452. Also see “Lamento” in *The New Grove Dictionary of Music and Musicians*, Second Edition, 2001, Oxford University Press, Volume 14, p. 191.

⁸ *Ibid.*, p. 381.

MUSICAL EXAMPLE 3

"The Meaning of the Blues"
 Julie London recording, 1957
 Low Winds Part

At 0:34



18. As is the case between the chromatic descending line chord progressions in "Taurus" and "Stairway", the chromatic descending line chord progression in "The Meaning of the Blues" has *similarities and differences* compared with the chord progressions in "Taurus" and "Stairway" transcribed and analyzed above, such as:

- The first chord in the chord progression in "The Meaning of the Blues" is "Am" which is the same as in "Stairway" and "Taurus";
- The second chord in "The Meaning of the Blues" is an "Am/G#" chord which includes all three pitches in the "G#+" chord in "Taurus" and "Stairway", and also has "g#" as the lowest note, but has an "a" pitch which is not in the "G#+" chord;
- The third chord in "The Meaning of the Blues" ("Am/G") shares all three pitches with the "C/G" chord in "Taurus" and "Stairway" and has the same lowest note, and shares all of four pitches with the corresponding "Am7/G" chord that occurs in four out of the six iterations of the chord progression under analysis in "Stairway";
- The fourth chord in "The Meaning of the Blues", "F#7(b5)", shares all three of the four pitches in the fourth chord in "Taurus", "F#ø7", is very similar thereto, and has the same lowest note as in "Taurus" and "Stairway";
- The fifth chord in "The Meaning of the Blues", "Fmaj7", is identical to the fifth chord in "Stairway" whereas the corresponding measure in "Taurus" is different from "Stairway" and "The Meaning of the Blues", and only shares its lowest pitch;
- The lowest pitch in the sixth chord in "The Meaning of the Blues", "d", is the same as the single (no chord) pitch in "Taurus";

- The final, “G(b5)” chord in “The Meaning of the Blues” is different from the final chords in “Taurus” and “Stairway”; and
- The harmonic rhythm in the first three chords and the metrical placement of the fourth chord in “The Meaning of the Blues” is the same as in “Taurus” and “Stairway”, but the harmonic rhythm of the remaining chords in “The Meaning of the Blues” is not the same as the remaining chords in “Taurus” and “Stairway”, and the harmonic rhythm in the last two chords in “Taurus” and “Stairway” is also different.

19. The 1964 *Mary Poppins* (Original Soundtrack) featuring Dick Van Dyke (with Julie Andrews) singing “Chim Chim Cher-ee” (attached as Track 4 on **Audio Exhibit 1**) includes a chromatic descending line chord progression. Written in a minor key, the chord progression is identified in Musical Example 4 below. The notes in the chromatically descending line are highlighted in red. Like “Taurus” and “Stairway”, the chromatic descending line chord progression in “Chim Chim Cher-ee” starts on scale degree 1 (an “a” pitch) and descends in half steps. The chromatic descent in “Chim Chim Cher-ee” is two notes longer through scale degree #4 (a “d#” pitch).

MUSICAL EXAMPLE 4

“Chim Chim Cher-ee”
(*Mary Poppins* Soundtrack, 1964)
Low Strings part

At 0:07

Am Am(maj7)/E Am7 D Dm Am B7 E

9 Am Am(maj7)/E Am7 D Dm Am E7 Am

20. As is the case between the chromatic descending line chord progressions in “Taurus” and “Stairway”, the chromatic descending line chord progression in “Chim

Chim Cher-ee” has *similarities and differences* compared with the chord progressions in “Taurus” and “Stairway” such as:

- There is a contiguous repeat of the chord progression in “Chim Chim Cher-ee” which is also the case in “Taurus” and “Stairway”;
- Unlike “Taurus” and “Stairway”, the descending chromatic line in “Chim Chim Cher-ee” is not in the lowest notes of the chords, rather, the descending chromatic line is played in the lower strings within the chords, as highlighted in red in Musical Example 4;
- The first chord in the chord progression in “Chim Chim Cher-ee” is “Am” which is the same as in “Stairway” and “Taurus”;
- The second chord in “Chim Chim Cher-ee” is “Am(maj 7)/E” which includes all three pitches in the second (“G#+”) chord in “Taurus” and “Stairway”;
- The third chord in “Chim Chim Cher-ee” (“Am7”) includes all three pitches in the third chord in “Taurus” and “Stairway”;
- The fourth chord in “Chim Chim Cher-ee”, “D”, matches the fourth chord in “Stairway” but the lowest pitch is “d”, not “f#”;
- The fifth chord in “Chim Chim Cher-ee”, “Dm”, shares two pitches with the “Fmaj7” chord in “Stairway” whereas the “f” note in the bass in “Taurus” only shares one note with “Stairway”;
- There is no corresponding sixth chord in “Taurus”, and the sixth chords in “Chim Chim Cher-ee” and “Stairway” are different;
- The contiguous repeat of the chord progression in “Chi Chim Cher-ee” ends with an “Am” chord, which is the same as in “Stairway”, although the total number of chords is not the same; and
- The meter (3/4) and harmonic rhythm of the chord progression in “Chim Chim Cher-ee” is different from the meter and harmonic rhythm in “Taurus” and “Stairway”.

21. The 1965 Astrud Gilberto recording of “How Insensitive” (attached as Track 5 on **Audio Exhibit 1**) composed by Antonio Carlos Jobim (the composer of

songs such as “The Girl from Ipanema”) includes a chromatic descending line chord progression. Written in a minor key, the chord progression is transcribed in Musical Example 5 below. The notes in the chromatic descending line are highlighted in red. Like “Taurus” and “Stairway”, the descending line chord progression in “How Insensitive” starts on scale degree 1 (an “a” pitch) and descends in half steps (i.e., chromatically) to scale degree 6 (an “f” pitch).

MUSICAL EXAMPLE 5

“How Insensitive”
(Astrud Gilberto recording, 1965)
Bass part

At 0:15

Am⁷ E^{(b9)/G#} G^{#o7}

5 Gm⁶ D⁷/F[#]

9 Dm/F B^bmaj⁷

13 Bm^{7(b5)} E⁷ Am⁷

22. As is the case between the chromatic descending line chord progressions in “Taurus” and “Stairway”, the chromatic descending line progression in “How Insensitive” has *similarities and differences* compared with the chord progressions in “Taurus” and “Stairway” such as:

- The first chord in the chord progression in “How Insensitive” is “Am⁷” which contains all three pitches and is very similar to the “Am” in “Stairway” and “Taurus”;

- The second chord in “How Insensitive”, “E(b9)/G#”, is similar to the second chord in “Taurus” and “Stairway” insofar as it includes two of the three pitches therein, and has the same lowest note;
- There is an additional embellishing chord “G#°7” in “How Insensitive” which extends the descent of the lowest note that is not in “Taurus” or “Stairway”;
- The corresponding third chord (based on the inclusion of the third chromatic descending note) in “How Insensitive” is “Gm6” which includes two of the three notes in the third chord in “Taurus” and “Stairway” and the same lowest note, “g”;
- The corresponding fourth chord in “How Insensitive”, “D7/F#”, is more similar to the fourth chord in “Stairway” (“D/F#”) than is the fourth chord in “Taurus”, “F#ø7”, to “Stairway”;
- The fifth chord in “How Insensitive”, “Dm/F”, is more similar to the fifth chord in “Stairway”, “Fmaj7”, (sharing two of its three notes and the same lowest note) than the scant similarity of only the lowest note between “Taurus” and “Stairway”;
- The respective sixth chords in “How Insensitive” and “Stairway” are different, and there is no corresponding sixth chord in “Taurus”;
- The chord progression in “How Insensitive” ends with an “Am7” chord, which is very similar to the “Am” chord in “Stairway” and related to the “A5” in “Taurus”, although the total number of chords in the chord progression is different; and
- The harmonic rhythm in the chord progression in “How Insensitive” is different from the harmonic rhythm in “Taurus” and “Stairway”.

23. The published sheet music of “How Insensitive” begins with the Chopin “Prelude” in E minor as its Introduction, which is an acknowledgment that the chromatic descending line chord progression in “How Insensitive” is related to the descending line chord progression in Chopin’s 1839 “Prelude in F minor”. The published sheet music of “How Insensitive” is attached as **Visual Exhibit F**.

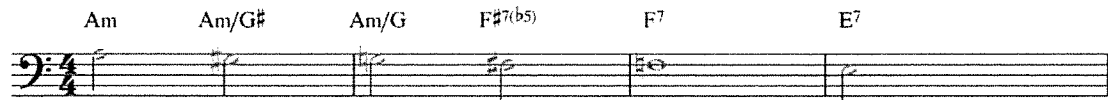
24. “Walkin’ My Baby Back Home” (1930) was recorded by many artists, including the 1952 release by Nat King Cole (attached as Track 6 on **Audio Exhibit 1**). While this song is in a major key, the Verses begin with the “tonicization” (i.e., the

momentary “tonic” or key tone) of a minor key. “Walkin’ My Baby Back Home” includes a chromatic descending line chord progression. The descending line chord progression in “Walkin’ My Baby Back Home” is transcribed in Musical Example 6 below. The notes in the chromatic descending line are highlighted in red. Like “Taurus” and “Stairway”, the descending line chord progression in “Walkin’ My Baby Back Home” starts on a (tonicized) scale degree 1 (an “a” pitch) and descends in half steps (i.e., chromatically). The descent in “Walkin’ My Baby Back Home” has an added note to scale degree 5 (an “e” pitch).

MUSICAL EXAMPLE 6

“Walkin’ My Baby Back Home” (1930)
(Nat King Cole recording, 1952)
Trombone part

At 0:43



25. As is the case between the descending line chord progressions in “Taurus” and “Stairway”, the descending line chord progression in “Walkin’ My Baby Back Home” has *similarities and differences* compared with the chord progressions in “Taurus” and “Stairway” such as:

- The first chord in the chord progression in “Walkin’ My Baby Back Home” is “Am” which is the same as the “Am” chord in “Taurus” and “Stairway”;
- The second chord in “Walkin’ My Baby Back Home”, “Am/G#”, includes all three pitches in the respective second chord in “Taurus” and “Stairway”, and has the same lowest pitch;
- The third chord in “Walkin’ My Baby Back Home”, “Am/G”, includes all three pitches in the third chord in “Taurus” and “Stairway” and has the same lowest pitch, “g”;

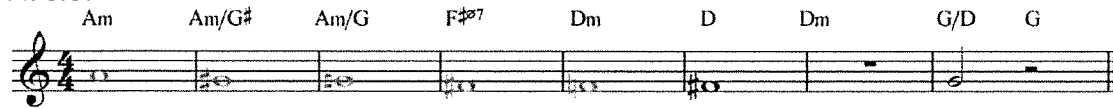
- The fourth chord in “Walkin’ My Baby Back Home”, “F#7(b5)”, is at least as similar to the fourth chord in “Stairway” (“D/F#”) as is the fourth chord in “Taurus”, “F#ø7”, to “Stairway”;
- The fifth chord in “Walkin’ My Baby Back Home”, “F7”, is more similar to the “Fmaj7” chord in “Stairway” than is the single note “f” in “Taurus” to “Stairway’s” fifth chord;
- There is no corresponding sixth chord in “Taurus”, and the respective sixth chords in “Walkin’ My Baby Back Home” are different from that in “Stairway”; and
- The harmonic rhythm in the first three measures of the four-measure chord progression in “Walkin’ My Baby Back Home” is the same as in “Taurus” and “Stairway”, and like “Taurus” and “Stairway”, the harmonic rhythm in the fourth measure is not the same although there are two chords in the fourth measure in “Taurus” and “Stairway” but only one chord in the fourth measure in “Walkin’ My Baby Back Home”.

26. “More” has been recorded by many artists, including a 1963 release by Vic Dana (attached as Track 7 on **Audio Exhibit 1**). While this song is in a major key, the portion transcribed in Musical Example 7 below begins with a “tonicization” (i.e., momentary change of the “tonic” or key tone) of a minor key. “More” includes a chromatic descending line chord progression, transcribed in Musical Example 7 below. The notes in the chromatic descending line are highlighted in red. Like “Taurus” and “Stairway”, the descending line chord progression in “More” starts on a (tonicized) scale degree 1 (an “a” pitch) and descends in half steps (i.e., chromatically) to scale degree 6 (an “f” pitch).

MUSICAL EXAMPLE 7

"More"
(Vic Dana recording, 1963)
Guitar part

At 0:37



27. As is the case between the chromatic descending line chord progressions in "Taurus" and "Stairway", the chromatic descending line chord progression in "More" has *similarities and differences* (as transcribed above and in the published sheet music attached as **Visual Exhibit G**) compared with the chord progressions in "Taurus" and "Stairway" such as:

- The chromatic descending line in the chord progression in "More" is in the guitar part as is the case in "Stairway";
- The first chord in the chord progression in "More" is "Am" which is the same as the "Am" chord in "Taurus" and "Stairway";
- The second chord in the chord progression in "More", "Am/G#", includes all three pitches in the second chord in "Taurus" and "Stairway" and has the same lowest pitch;
- The third chord in "More", "Am/G", includes all three pitches in the third chord in "Taurus" and "Stairway" and the same lowest pitch, "g";
- The fourth chord in "More", "F#ø7", is the same as the fourth chord in "Taurus";
- The fifth chord in "More", "Dm", is at least as similar to the fifth chord in "Stairway" ("Fmaj7") as the single "f" in "Taurus";
- The sixth chord in "More" is "D", which is more similar to the "d" note in the corresponding progression in "Taurus", than any similarity between the "d" note and the sixth chord in "Stairway" ("G/B");
- The remaining chords after the descending line chords in "More" are dissimilar to the final chords in "Taurus" and "Stairway"; and

- The harmonic rhythm in the chord progression in “More” is different from the harmonic rhythm in “Taurus” and “Stairway”.

28. “It Don’t Mean a Thing (If It Ain’t Got That Swing)” (1932) was co-written by Duke Ellington. The published sheet music is attached as **Visual Exhibit H**. “It Don’t Mean a Thing” begins in a minor key, and moves back and forth from a minor key to a major key. In the attached published sheet music, “It Don’t Mean a Thing” begins in the key of G minor. The chords in the chromatic descending line chord progression are circled by hand in **Visual Exhibit H**. The number of descending chords (five) is the same in the chord progressions in “Taurus” and “Stairway”. The scale degrees of the lowest pitches in the chords in “It Don’t Mean a Thing” are the same as in “Taurus” and “Stairway”: scale degree 1 chromatically descending to scale degree 6. Moreover, the harmonic rhythm in the first four of the total five descending chromatic chords is the same as in “Taurus” and “Stairway”.



29. “Night and Day” (1934) was composed by Cole Porter. The published sheet music is attached as **Visual Exhibit I**. “Night and Day” is in a major key. In the attached published sheet music, “Night and Day” is in the key of E-flat major. The chords in the chromatic descending line chord progression are circled by hand in **Visual Exhibit I**. The number of descending chords (five) is the same in the chord progressions in “Taurus” and “Stairway”. The scale degrees of the lowest pitches in the chords are not the same as in “Taurus” and “Stairway”, but as in “Taurus” and “Stairway”, (1) the same number of pitches descends, namely, five and (2) these five pitches are the lowest pitches in the chords.

30. The music in “One Note Samba” (1961) was composed by Antonio Carlos Jobim. The published sheet music is attached as **Visual Exhibit J**. “One Note Samba” is in a major key. In the attached published sheet music, the chords in the chromatic descending line chord progression are circled by hand. The number of descending chords (five) is the same in the chord progression “Taurus” and “Stairway”. The scale degrees of the lowest pitches in the chords are not the same as in “Taurus” and

"Stairway", but as in "Taurus" and "Stairway", (1) the same number of pitches descends, namely, five and (2) the five pitches are the lowest pitches in the chords.

31. In addition to the nine "prior art" works (i.e., works that predate "Taurus") analyzed above, a tenth work is presented here that was released in 1969, after the copyright of "Taurus", but before the recording and release of "Stairway". The music in "What Are You Doing the Rest of Your Life?" was composed by Michel Legrand. It was part of the sound track for the 1969 motion picture, *The Happy Ending*. "What Are You Doing the Rest of Your Life?" was nominated for an Oscar for "Best Music, Song" (along with Jeanne Simmons for "Best Actress in a Leading Role"). The published sheet music is attached as **Visual Exhibit K**. "What Are You Doing the Rest of Your Life?" is in a minor key; the published sheet music is in the key of A minor, the same key as "Stairway". The chords in the chromatic descending line chord progression are circled by hand in **Visual Exhibit K**. The number of descending chords (five) is the same in the chord progression in "Taurus" and "Stairway". Moreover, in the attached published sheet music, the lowest pitches in the five descending chords are the same as in "Taurus" and "Stairway", i.e., they start on "a" and end on "f".

B. 4. THE NOTES IN THE CHORDS IN THE FOUR-MEASURE CHORD PROGRESSIONS ARE ITERATED IN DIFFERENT SEQUENCES

32. A "broken chord" occurs when the pitches of a chord are iterated "successively rather than simultaneously".⁹ Another term for "broken chord" is "arpeggio".¹⁰ "Taurus" consists of two musical staves, the upper staff is in the "treble clef" marked by the sign, . The lower staff is in the "bass clef" marked by the sign, . The notes in the lower and upper staves play simultaneously from left to right. The music in "Taurus" that is similar to "Stairway" is in Section A and is in the lower staff or "bass clef". In order to facilitate a comparison with the first four measures in "Stairway",

⁹ *The Harvard Dictionary of Music*, see "Broken Chord", p. 122.

¹⁰ *The Harvard Dictionary of Music*, see "Arpeggio", p. 57.

in Musical Example 8 below, the notes in the lower staff in “Taurus” are notated in the “treble clef” (not the “bass clef”), transposed up an “octave” (thereby maintaining the same pitch names and internal intervals from pitch to pitch), and with their note values halved (in order to line corresponding notes up with those in “Stairway”. These changes to the transcription of this portion of “Taurus” are in keeping with musicological practices, and facilitate the comparative analysis of this portion of “Taurus” with the four-measure chord progression in “Stairway”.

MUSICAL EXAMPLE 8

The notes that outline the four-measure chord progressions

Top line = Section A in “Taurus” with note values halved

Two lower lines = Measures 1-4 in “Stairway”

The musical example consists of two staves. The top staff, representing Section A in "Taurus", shows four measures of music with the following chords: Am, Ab+ (G#+) , C/G, and Gb97 (F#97) , followed by a double bar line and then A5. The bottom staff, representing Measures 1-4 in "Stairway", shows four measures of music with the following chords: Am, G#+, C/G, D/F#, Fmaj7, and G/B Am. The notes are transposed up an octave and have halved note values compared to the original "Taurus" piece.

33. The sequences (or succession) of the pitches in the four-measure chord progressions in “Taurus” and “Stairway” are different. Thus, while chords are arpeggiated (a centuries old commonplace musical device) in these portions of “Taurus” and “Stairway”, the notes are not the same. The arpeggiating of the chords in “Stairway” creates *at least* two melodic lines in which the lower melodic line consists wholly of successive chromatic descending notes and the upper melodic line consists of “broken chords” or “arpeggios”. Within the upper melodic line in “Stairway”, there is another melodic line consisting of two-note phrases in the high part of the upper melodic line from “a” to “b” (landing on beat 3 in measure 1), from “b” to “c” (landing on beat 1 in measure 2), and from “c” to “f#” (landing on beat 3 in measure 2). By way of very

significant difference, the upper notes in “Taurus” are confined on the pitch “e” in measures 1 and 2, and through the first two beats of measure 3.

**B. 5. SIMILARITY IN THE CHORDS ON THE GUITAR IN “STAIRWAY”
IS FOUND IN PRIOR ART**

34. Similarity in the playing of the chords ***on the guitar*** in the four-measure chord progressions in “Stairway” is found in prior art. On the other hand, “Taurus” does not designate any instrument. Analysis of the harmony and *melody* in these prior art works is presented in **Attachment D – Melody** later in this report. For now, listed immediately below are the title, performing artist(s), and recording release date of these additional prior art works that embody a chromatic descending line within a chord progression. In each of the works listed immediately below, a chromatic descending line chord progression is played ***on the guitar***, which is the case in “Stairway”.

Released Prior to “Taurus”

- a. “My Funny Valentine” (1937)
Johnny Mathis recording, released in **1960**
Guitar part at 1:00 in the Verses
- b. “A Taste of Honey” (1960)
(Cover by) The Beatles, released in **1963**
Guitar part beginning at 0:15 in the Verses
- c. “Cry Me a River” (1953)
Davey Graham recording released in **1963**
Guitar part beginning at 0:19
- d. “Michelle” (1965)
The Beatles recording released in **1965**
Guitar part at the opening of the Introduction
- e. “Music To Watch Girls By” (1966)
Andy Williams recording released, **April, 1967**
Guitar part during the Introduction and in the Verses

f. "Summer Rain" (1967)
Johnny Rivers recording released **Nov. 1967**
Guitar part during the Introduction and Verses

Released After "Taurus" but prior to recording "Stairway"

g. "Ice Cream Dreams" (recorded in 1968)
Cartoone recording released in **1969**
Guitar part during the Introduction and Verses

h. "Thoughts" (1969)
Crow recording released in **1969**
Guitar part during the Introduction and the Verses

i. "And She's Lonely" (1969)
The Chocolate Watchband recording released in **1969**
Guitar part during the Outro

35. In addition to the nine works listed above, the music from the 1971 film, *Summer of '42* (released in April 1971), includes "The Summer Knows". Awarded an Oscar for Michel Legrand's musical score, "The Summer Knows" includes a descending chromatic line chord progression.

"Spring Is Near" in 1960 or 1961, a recording session arranged by Jimmy Page

36. It is my understanding that Jimmy Page arranged to have "Spring Is Near" recorded in 1960 or 1961 by a band called Chris Farlowe & The Thunderbirds. "Spring Is Near" was never released. I understand that Mr. Page sent a copy thereof to Defendants' counsel, who sent a copy to me as an mp3. The opening guitar part includes a descending chromatic line chord progression transcribed in Musical Example 9 below, and attached as Track 8 on **Audio Exhibit 1**.

37. "Spring Is Near" is recorded in the key of A minor, as is "Stairway". The chord progression in "Spring Is Near" is eight bars, followed by a contiguous repeat of that eight bar chord progression. The descending chromatic notes played on the guitar in "Spring Is Near" are highlighted in red in Musical Example 9. There are three sets of descending chromatic notes within the first chord progression: (1) from "a" down to "f#"

(see measures 1-2); (2) from “g” down to “e” (see measures 3-4); and (3) from “f” down to “d” (see measures 5-6). These three sets of descending chromatic notes are repeated in the contiguous repeat of the eight-measure chord progression in measures 9-10, 11-12, and 13-14. Thus, like “Stairway”, “Spring Is Near”:

- Is in the key of A minor;
- Begins with a guitar Introduction;
- The guitar in that Introduction iterates a descending chromatic line chord progression;
- The descending chromatic line starts on scale degree 1 (“a”); and
- The chord progression is contiguously repeated.

MUSICAL EXAMPLE 9

“Spring Is Near” (1960 or 1961)

Guitar

At 0:04

The musical score for the guitar introduction of "Spring Is Near" is written in 4/4 time and consists of 14 measures. The key signature has one flat (B-flat), indicating A minor. The score is organized into five lines of music, each with chord labels above the notes.

- Line 1 (Measures 1-6):** Am(omit5), G#(omit5), N.C., F#(b5)(omit3), Gm(omit5), F#(omit5).
- Line 2 (Measures 7-12):** N.C., E(b5)(omit3), Fm(omit5), E(omit5), N.C., D(b5)(omit3), F(omit5).
- Line 3 (Measures 13-14):** F(b5), Em(omit5), Am, G#.
- Line 4 (Measures 15-20):** C/G, F#(b5)(omit3), N.C., Gm, F#+, Bb/F, Bb(b5)/E.
- Line 5 (Measures 21-26):** Fm, E+, N.C., D(b5)(omit3), F(b5), N.C.

The notation includes various chord symbols such as Am(omit5), G#(omit5), N.C. (No Chord), F#(b5)(omit3), Gm(omit5), F#(omit5), E(b5)(omit3), Fm(omit5), E(omit5), D(b5)(omit3), F(omit5), F(b5), Em(omit5), Am, G#+, C/G, Bb/F, Bb(b5)/E, Fm, E+, and D(b5)(omit3). The score also includes a repeat sign at the end of the first line and a double bar line at the end of the fifth line.

B. 6. SUMMARY OF THE ANALYSIS OF HARMONY

38. On the basis of my analysis of the harmonies in “Taurus” and “Stairway”, I found that there are no significant harmonic similarities. With respect to the two works as a whole, there are significant harmonic differences. Eighteen (18) measures out of a total of 166 measures in “Stairway” contain harmonic similarities to “Taurus”. Within those 18 measures, the similarity is limited to three measures that are iterated a total of 6 times in “Stairway”. The harmonic similarities that do exist are insubstantial and result from chord progressions commonly used prior to “Taurus”. Moreover, the chord progressions in the remaining portions of “Stairway” are very different from the chord progressions in “Taurus”. Thus, any harmonic similarities to “Taurus” in “Stairway” are heard within an overall context of harmonic differences.

39. The harmonic similarities between “Taurus” and “Stairway” are the result of the use of a musical building block chromatic descending line (or scale) of pitches and the chords that flow from it. The similarity represents widely used chord progression practices in popular music prior to “Taurus”, in classical music as early as the 17th century, and so common that they are sometimes referred to as a “minor line cliché”.

40. Similar chord progressions in ten works (including “Spring Is Near”) that predate “Taurus” and one work that was released in between “Taurus” and “Stairway” (“What Are You Doing the Rest of Your Life”) were analyzed above. Moreover, analyzed in the **Attachment - Melody**, six additional works that predate “Taurus” and three works that were released in between “Taurus” and “Stairway” (identified above) have similar chord progressions and are *played on a guitar*, as in “Stairway”.

41. On that basis, I found that any harmonic similarities between “Taurus” and “Stairway” are insignificant and represent harmonic practices that were widely used prior to “Taurus”.

*Michael Skidmore, etc.*VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-4

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____
Deputy Clerk**FERRARA REPORT****ATTACHMENT C – ANALYSIS OF RHYTHM****C. 1. THERE ARE NO SIGNIFICANT RHYTHMIC SIMILARITIES BETWEEN "TAURUS" AND "STAIRWAY" BUT THERE ARE SIGNIFICANT RHYTHMIC DIFFERENCES**

1. I found that there are no significant rhythmic similarities between "Taurus" and "Stairway", but there are significant rhythmic differences. Moreover, when combined with my findings regarding structure and harmony (above), I found that there are no significant structural, harmonic and/or rhythmic similarities, individually or in the aggregate.

2. "Taurus" and "Stairway" are in 4/4 meter, also termed "common time." In 4/4 meter, music is divided into measures, in which there are 4 quarter note beats. Countless musical compositions are in 4/4 meter; 4/4 meter is a fundamental musical building block. By way of difference, some "Stairway" published sheet music includes changes of meter (see **Visual Exhibit C**). However, "Stairway" can be transcribed wholly in 4/4 meter as well (see **Visual Exhibit B**).

3. The tempo at the beginning of "Stairway" is 72 beats per minute, but it gradually and significantly increases from 72 beats per minute during the Introduction to 102 beats per minute by Verse 6. The incremental acceleration of the tempo and increase in the rhythmic complexity is a hallmark of the overall rhythmic feel and flow of "Stairway". "Taurus" does not include an indication of the tempo. Moreover, the composition embodied in "Taurus" does not remotely include the developing rhythmic complexity in "Stairway".

4. The basic rhythmic pulse in the portion of "Taurus" with similarities to "Stairway" is quarter notes, but the basic rhythmic pulse in the portion of "Stairway" with similarities to "Taurus" is eighth notes. Only after halving the notes values in "Taurus" can they be properly compared with the notes in "Stairway".

5. On the basis of my analysis, I found that the overall rhythms are very different in “Taurus” and “Stairway”. This is illustrated in “Taurus” in **Visual Exhibit A** and “**Stairway**” in **Visual Exhibit B**. A transitory similarity is in an eighth-note rhythm (only after halving the note values in “Taurus”) during the four-measure chord progressions under discussion. A repeating eighth-note rhythm is a basic building block rhythm. Moreover, as analyzed above and below, the chromatic descending line chord progressions in many of the prior art works also include an eighth-note rhythm.

6. Significant rhythmic differences abound in “Taurus” and “Stairway”, such as:

- The basic rhythmic pulse in the portion of “Taurus” with similarities to “Stairway” is quarter notes as written, but the basic rhythmic pulse in the portion of “Stairway” with similarities to “Taurus” is eighth notes;
- The descending and rising quarter notes in four measures out of a total 9 measures in Section B in “Taurus” are very different from the rhythm in any four-measure section in “Stairway”;
- The sixteenth-note rhythms in the guitar part during the final iteration of the descending line chord progression during the Interlude section in “Stairway” (see mm. 37-40 in **Visual Exhibit B**) are very different from the rhythms in any four-measure section in “Taurus”;
- The repeating four-measure syncopated rhythms in the guitars and electric piano played throughout the entire Refrains 1, 2, 3, and 4 in “Stairway” are very different from the rhythms in any four-measure section in “Taurus”;
- The rhythms during the Bridge in “Stairway” (see mm. 110-117 in **Visual Exhibit B**) are very different from the rhythms in any section of “Taurus”;
- The rhythms during the guitar solo in “Stairway” (see mm. 118-137 in **Visual Exhibit B**) are very different from the rhythms in any section of “Taurus”;
- The rhythms during Verse 6 in “Stairway” (see mm. 138-155 in **Visual Exhibit B**) are very different from the rhythms in any section of “Taurus”;

- The rhythms in the vocal melodies sung during the Verses and Refrains in “Stairway” are very different from the rhythms in any section of “Taurus”; and
- The incremental acceleration of the tempo and increase of rhythmic complexity is a hallmark of the overall rhythmic feel and flow of “Stairway”, which is absent in “Taurus”.

C. 2. SUMMARY OF THE ANALYSIS OF RHYTHM

7. In summary, on the basis of my analysis, I found that there are no significant rhythmic similarities between “Taurus” and “Stairway”, but there are significant rhythmic differences. The rhythms in “Taurus” and “Stairway” in their entirety are very different. When combined with my findings regarding structure and harmony (above), I found that there are no significant structural, harmonic and/or rhythmic similarities, individually or in the aggregate, between “Taurus” and “Stairway”.

*Michael Skidmore, etc.*VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-5

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____

Deputy Clerk

FERRARA REPORT**ATTACHMENT D – ANALYSIS OF MELODY****A. 1. THERE ARE NO SIGNIFICANT MELODIC SIMILARITIES
BUT THERE ARE SIGNIFICANT MELODIC DIFFERENCES**

1. I found that there are no significant melodic similarities between “Taurus” and “Stairway”, but there are significant melodic differences. Moreover, when combined with my findings regarding structure, harmony, and rhythm, I found that there are no significant structural, harmonic, rhythmic and/or melodic similarities, individually or in the aggregate between “Taurus” and “Stairway”.

2. As defined in Paragraph 6(d) in the body of the report, “melody” is a single line of music that consists primarily of a succession (*i.e.*, a sequence) of pitches and the rhythmic durations of those pitches within a melodic phrase structure. Pitch is the specific high or low placement of a musical sound, often identified within a musical scale.

**A. 2. MINIMAL MELODIC SIMILARITIES RESULT FROM THE USE OF
A MUSICAL BUILDING BLOCK**

3. On the basis of my analysis of the entirety of “Taurus” and “Stairway”, I found that the melodies throughout “Taurus” and “Stairway” are different. The vocal melodies in “Stairway” are very different from the melodies in “Taurus”. The guitar melodies, of the four-measure chord progression in “Stairway” and in Section A in “Taurus” under study, are very different from the melodies in “Taurus”.

4. A minimal melodic similarity between Section A in “Taurus” and the 3-measure portion in “Stairway” is the chromatic descending line (or scale) from the pitches “a” to “f” in measures 1, 2 and 3 in the four-measure chord progressions analyzed in **Attachment B – Harmony** in this report. This minimal melodic similarity is the result of the use of descending line chord progressions which were widely used in music prior to “Taurus”. The lowest pitches in the first three measures of the four-

measure chord progressions in “Taurus” and “Stairway” simply move down the chromatic scale. This is illustrated in Musical Example 10 below¹ in which the descending chromatic notes are highlighted in red. The top staff is the melody in “Taurus” (in treble clef and with note values halved) that arpeggiates the chords, and the bottom staff is the melody in “Stairway” that arpeggiates the chords.

5. As highlighted in red in Musical Example 10, the chromatic descending line in the first three measures of the four-measure chord progression in “Taurus” and “Stairway” starts on scale degree 1 (an “a” pitch) and descends in half steps (i.e., chromatically) to scale degree 6 (an “f” pitch). In “Stairway”, along with the guitar part, this commonplace descent in half steps is mirrored in the recorder parts in five of the total six iterations of the four-measure chord progression.

MUSICAL EXAMPLE 10

The notes that outline the four-measure chord progressions

Top staff = Section A in “Taurus” with note values halved

Bottom staff = Measures 1-4 in “Stairway”

The musical example consists of two staves. The top staff, labeled 'Top staff = Section A in “Taurus” with note values halved', shows a four-measure chord progression: Am, Ab+ (G#+), C/G, Gbø7 (F#ø7), N.C., and A5. The bottom staff, labeled 'Bottom staff = Measures 1-4 in “Stairway”', shows a four-measure chord progression: Am, G#+, C/G, D/F#, Fmaj7, and G/B Am. Red highlights indicate a descending chromatic line from A to F in the first three measures of both staves.

6. This descending chromatic scale, a total of five pitches from “a” down to “f” in the key of A minor, is a fundamental musical building block. This fundamental musical building block consists of simply playing an “a” on a piano and then playing each neighboring key to the left through “f”, a total of five neighboring keys separated by

¹ The numbering of musical examples herein follows that in **Attachment B – Harmony** in which Musical Example 9 was the last musical example.

a half step, the smallest interval in use in the Western music system.² Countless students on many instruments (including the guitar) practice chromatic and other scales.

7. Moreover, the rhythmic durations of the first four of the five descending notes in “Taurus” is quarter note, quarter note, eighth note, eighth note, but the rhythmic duration of the first four descending notes in “Stairway” is a half note which is 2 beats and is thereby two times longer than a quarter note and four times longer than an eighth note. Only the fifth and final descending note is the same in “Taurus” and “Stairway”, a whole note (which equals 4 quarter note beats).

8. There is nothing remotely creative about the similarity of five chromatic descending notes (four of which have *different* rhythmic durations) in “Taurus” and “Stairway”.

A. 3. THE ORDER OF THE MELODIC NOTES THAT ARPEGGIATE THE CHORDS ARE DIFFERENT

9. The order (sequence) of the notes that arpeggiate the chord progressions under study in “Taurus” and “Stairway” are different. First, there are *at least* two melodic lines in “Stairway” in which the lower melodic line consists wholly of successive chromatic descending notes and the upper melodic line consists of “arpeggios” (“broken chords”). Within the upper melodic line in “Stairway”, upper consecutive eighth notes create a memorable series of two-note melodic phrases that move from “a” to “b” (landing on beat 3 in measure 1), from “b” to “c” (landing on beat 1 in measure 2), and from “c” to “f#” (landing on beat 3 in measure 2). Second and by way of very significant difference, the upper notes in “Taurus” are confined on “e” in measures 1 and 2, and the arpeggiation is absent in measure 3 in “Taurus”, but continues in measure 3 in “Stairway”.

10. Even after halving the value of the notes in Section A in “Taurus” to better align them with the notes in the four-measure chord progression in “Stairway”, out of a

² See “scale” in *The Harvard Dictionary of Music*, p. 757.

total of 27 notes in the guitar part in measures 1, 2, and 3 in the four-measure chord progression in “Stairway”, the only *itches* that align with pitches in Section A in “Taurus” are the five chromatic descending pitches (a fundamental musical building block), and a single fragmentary “e” pitch on beat 2 in measure 1. Moreover, out of 27 notes in measures 1, 2, and 3 in “Stairway” only *two* notes have the same pitch (within the same octave), the same rhythmic duration, and the same metrical placement with Section A in “Taurus”: the single “e” eighth note on beat 2 in measure 1 and the whole note “f” in measure 3. Thus, the arpeggiated melodies in “Taurus” and “Stairway” are very different. The melodic similarity consists of the commonplace and fundamental musical building block descending chromatic scale in which the rhythmic durations of four of the five notes are *different* in “Taurus” and “Stairway”.

A. 4. MELODIC SIMILARITIES IN THE GUITAR PART UNDER ANALYSIS IN “STAIRWAY” ARE FOUND IN GUITAR PARTS IN PRIOR ART

11. Melodic similarities analyzed above, which occur in Section A in “Taurus” and in the three-measure *guitar* part in “Stairway”, are found in *guitar* parts in prior art. The descending chromatic notes in “Stairway” are in the guitar part and are simply mirrored in the simultaneously descending chromatic notes in the lower recorder in “Stairway”.) Insofar as the minimal and commonplace melodic similarities in “Taurus” and “Stairway” are a result of the use of the commonplace chromatic descending line chord progression, analysis of the *harmony* and *melody* in the guitar parts in the prior art works is presented below. Starting with the prior art work in Musical Example 11 below and thereafter, a transcription of the *guitar* part transcribed in A minor with the chromatic descending line highlighted in red note heads is presented. Immediately above each transcription are the title, performing artist(s), and recording release date.

12. As transcribed in Musical Example 11, the guitar part in the 1960 Johnny Mathis recording of “My Funny Valentine” (attached as Track 9 on **Audio Exhibit 1**) embodies a chromatic descending line chord progression. The descending line notes are highlighted in red. Like the guitar part in “Stairway” starting with the “g#” in measure 2 of “My Funny Valentine”, the descending line chord progression played on the guitar

consists of two melodic lines in which one melodic line consists wholly of successive chromatic descending notes and one melodic line consists of arpeggios. Moreover, the initial note, “a”, on beat 1 in the guitar part in “My Funny Valentine” is an octave lower than the subsequent descending chromatic line, which is the same in the second iteration of the chromatic descending notes in the guitar part in “Stairway” starting in measure 5 (see measure 5 in **Visual Exhibit B**). While the descending chromatic notes in the Johnny Mathis recording of “My Funny Valentine” are not the lowest notes in the chords but are played on a guitar, the published sheet music of “My Funny Valentine” (attached as **Visual Exhibit L**) identifies the descending chromatic notes as the lowest (bass) notes.

MUSICAL EXAMPLE 11

“My Funny Valentine” (1937)
Johnny Mathis recording, released in 1960
Guitar part at 1:00 in the Verse

At 1:00

Am Am(maj7) Am7 Am6

F Dm Bm11(b5) E(b5) Dm6 E+7(b9)

5

13. As transcribed in Musical Example 11, the notes played on the guitar in the 1960 recording of “My Funny Valentine” are much more similar to the notes played on the guitar in “Stairway” than are the notes in Section A in “Taurus” to “Stairway” because (1) the range of the lowest to the highest notes within each measure with descending “a”, “g#”, “g”, and “f#” chromatic notes in “Stairway” and “My Funny Valentine” is greater than an octave, but by way of difference they are less than an octave in “Taurus” and (2) the only break in the eighth-note pulse in “Stairway” is a tied

(i.e., held over) note on the second half of beat 2 in measure 3, which is very different from measure 3 in “Taurus” which stops completely the eighth-note pulse.

14. There are eight arpeggiated notes with each of the first four descending notes and seven with the fifth descending note in “My Funny Valentine, which is not the case in “Taurus” or in most of the iterations in “Stairway”. However, in the final iteration of the four-measure chord progression in “Stairway” (see measures 37-39 in the “Interlude” section in **Visual Exhibit B**) like “My Funny Valentine” but unlike “Taurus”, there are as many as six or seven arpeggiated notes per descending chromatic note, sometimes including the descending note as part of the arpeggio.

15. As transcribed in Musical Example 12 below, the guitar part in the 1963 recording of “A Taste of Honey” by The Beatles (attached as Track 10 on **Audio Exhibit 1**) embodies a chromatic descending line chord progression. The descending line notes are highlighted in red. Like the guitar part in “Stairway” and measures 1 and 2 in Section A in “Taurus”, the guitar part in “A Taste of Honey” consists of arpeggios.

16. Like “Taurus” and “Stairway”, the descending chromatic notes “a”, “g#”, and “g” in “A Taste of Honey” are the lowest notes of the guitar part, but the “f#” is not, and the fifth descending note, “f” is not reached. The range of the arpeggiated notes in “A Taste of Honey” is more similar to the arpeggiated notes in “Stairway” than is “Taurus” to “Stairway” because the lowest to the highest notes within each measure with descending “a”, “g#”, and “g” chromatic notes in “A Taste of Honey” are an octave and with the “f#” the range is greater than an octave, while they are less than an octave in “Taurus” but more than an octave in “Stairway”. The meter in “A Taste of Honey” is 3/4 time, whereas it is 4/4 time in “Taurus” and “Stairway”, and there are “triplets” (a rhythm that divides a beat into three notes) but not in “Taurus” or “Stairway”.

MUSICAL EXAMPLE 12

“A Taste of Honey” (1960)
 (Cover by) The Beatles, released in **1963**
 Guitar part at 0:15 in the Verse

At 0:15



17. As transcribed in Musical Example 13 below, the 1963 recording of “Cry Me a River” by guitarist Davey Graham (attached as Track 11 on **Audio Exhibit 1**) embodies a four-measure chromatic descending line chord progression. The descending line notes are highlighted in red. Like “Stairway” and the first two measures of Section A in “Taurus”, the guitar part in “Cry Me a River” consists of arpeggios in the measures with the descending notes “a”, “g#”, “g”, and “f#”. The final chromatic note in “Cry Me a River” does not descend by a half step but occurs an octave lower. The descending notes in “Cry Me a River” are not a separate descending melodic line but part of the arpeggios which is the case in measures 1 and 2 in “Taurus”, but not “Stairway”, and there are triplets in “Cry Me a River” but not in “Taurus” or “Stairway”.

18. Like “Taurus” and “Stairway”, the descending chromatic notes in “Cry Me a River” are the lowest notes of the chords (there is a passing low “e” in measure 2). The range of the arpeggiated notes in “Cry Me a River” are more similar to the arpeggiated notes in “Stairway” than is Section A in “Taurus” to “Stairway” because the lowest to the highest notes within each measure with descending “a”, “g#”, “g”, and “f#” chromatic notes in “Cry Me a River” are greater than an octave which is the case in “Stairway”, but not the case in “Taurus”.

MUSICAL EXAMPLE 13**“Cry Me a River” (1953)**Davey Graham recording released in **1963**

Guitar part at 0:19

At 0:19

Musical notation for Musical Example 13, showing a guitar part with chords and triplets. The notation is in 4/4 time and features a descending chromatic line of chords. The chords are: Am, G#+, C/G, F#m7, F7, G, Cmaj7, E7, Am, A5/G#, C/G, G#+, Dm/F, E7, A5, B7. The notation includes triplets of eighth notes and a measure starting with a '5' indicating a fifth fret position.

19. As transcribed in Musical Example 14 below, the guitar part in the 1965 recording of “Michelle” by The Beatles (attached as Track 12 on **Audio Exhibit 1**) embodies a four-measure chromatic descending line chord progression. The five descending chromatic notes from “a” through “f” are highlighted in red.

MUSICAL EXAMPLE 14**“Michelle” (1965)**The Beatles recording released in **1965**

Guitar part at opening of the Introduction

At 0:00

Musical notation for Musical Example 14, showing a guitar part with chords. The notation is in 4/4 time and features a descending chromatic line of chords. The chords are: Am/E, E+, Am7, Am6, Fmaj7/A, E5. The notation includes a triplet of eighth notes and a measure starting with a '5' indicating a fifth fret position.

20. The range of the lowest to the highest notes in the guitar parts in the respective descending chromatic chord progressions in “Michelle” and Section A in “Taurus” is much more similar than the range in the guitar part in “Stairway” is to

"Taurus". In fact, they are *identical* in "Michelle" and the first two measures in "Taurus" from low note to high note as follows:

- "a" to "e", a perfect fifth in "Michelle" and "Taurus", but not in "Stairway";
- "g#" or "a-flat" to "e", a minor sixth in "Michelle" and "Taurus", but not in "Stairway";
- "g" to "e", a major sixth in "Michelle" and "Taurus", but not in "Stairway"; and
- "f#" or "g-flat" to "e", a minor seventh in "Michelle" and "Taurus", but not in "Stairway".

21. Notably, the upper notes in "Taurus" are confined on "e" in measures 1 and 2 which is also the case in "Michelle". These similarities between the 1965 "Michelle" and "Taurus" are illustrated in Musical Example 15 below in which Section A in "Taurus" is placed over the guitar part in "Michelle" to facilitate a comparison.

MUSICAL EXAMPLE 15

"Taurus" and "Michelle"

The four-measure chord progressions

Top staff = Section A in "Taurus" with note values halved

Bottom staff = Measures 1-4 in "Michelle"

The musical example consists of three staves. The top staff, labeled '"Taurus" Deposit Copy', shows a four-measure progression in 4/4 time with chords Am, Ab+ (G#+), C/G, and Gb07 (F#07). The bottom staff, labeled '"Michelle" 0:00', shows a four-measure progression in 4/4 time with chords Am/E, E+, Am7, and Am6. A third staff, starting at measure 3, shows a continuation of the 'Michelle' progression with chords Fmaj7/A, E5, and A5.

22. As transcribed in Musical Example 16 below, the guitar part in the (April) 1967 recording of “Music to Watch Girls By” by Andy Williams (attached as Track 13 on **Audio Exhibit 1**) embodies a chromatic descending line chord progression. The descending line notes are highlighted in red.

MUSICAL EXAMPLE 16

“Music To Watch Girls By” (1966)
Andy Williams recording released, **April, 1967**
Guitar part during Introduction and Verse

At 0:06



23. Like “Taurus” and “Stairway”, the descending chromatic notes in “Music to Watch Girls By” are the lowest notes, but they do not reach the fifth note, “f”. The range of the highest to lowest notes in the guitar parts in the respective descending chromatic chord progressions in “Music to Watch Girls By” and measures 1 and 2 in Section A in “Taurus” is much more similar than the range in the guitar part in “Stairway” is to “Taurus”. In fact, they are *identical* in “Music to Watch Girls By” and “Taurus” from low note to high note in the descent from “a” through “f” as follows:

- “a” to “e”, a perfect fifth in “Music to Watch Girls By” and “Taurus”, but not in “Stairway”;
- “g#” to “e”, a minor sixth in “Music to Watch Girls By” and “Taurus”, but not in “Stairway”;
- “g” to “e”, a major sixth in “Music to Watch Girls By” and “Taurus”, but not in “Stairway”; and

- “f#” or “g-flat” to “e”, a minor seventh in “Music to Watch Girls By” and “Taurus”, but not in “Stairway”.

24. Indeed, the similarities in the first two measures in the guitar part in “Music to Watch Girls By” and “Taurus” are greater than between “Taurus” and “Stairway” as analyzed above and illustrated in Musical Example 17 below in which the first two measures from Section A in “Taurus” are placed over the first two measures in “Music to Watch Girls By”. Notably, in addition to all of the similarities presented immediately above, the upper notes in “Taurus” are confined on “e” in measures 1 and 2, as they are in measures 1 and 2 in “Michelle”.

MUSICAL EXAMPLE 17

“Taurus” and “Music to Watch Girls By”

Measures 1 and 2 of the four-measure chord progressions

Top line = Section A in “Taurus” with note values halved

Lower line = Measures 1-2 in “Music to Watch Girls By”

The musical example shows two staves of music in 4/4 time. The top staff, labeled "Taurus" Deposit Copy, contains measures 1 and 2 of Section A. The bottom staff, labeled "Music To Watch Girls By" 0:06, contains measures 1 and 2. Chord symbols are written above each staff.

Measure	"Taurus" Chord	"Music To Watch Girls By" Chord
1	Am	Am
2	Ab+ (G#+)	Am(maj7)/E
3	C/G	Am7
4	Gbø7 (F#ø7)	F#ø7/E

25. As transcribed in Musical Example 18 below, the guitar part in the (November) 1967 recording of “Summer Rain” by Johnny Rivers (attached as Track 14 on **Audio Exhibit 1**) embodies a chromatic descending line chord progression. The descending line notes are highlighted in red. Like “Taurus” and “Stairway”, the descending chromatic notes in “Summer Rain” are the lowest notes. There are three contiguous iterations of a chromatic descending line chord progression: the first two iterations descend chromatically (*i.e.*, in half steps) from the notes “a” through “f#”, and the third iteration descends chromatically from the notes “a” through “f”. The

descending chromatic line in “Taurus” and “Stairway” are also from the notes “a” through “f”.

MUSICAL EXAMPLE 18

“Summer Rain” (1967)

Johnny Rivers recording released **Nov. 1967**

Guitar part during the Introduction and continuing thereafter

At 0:00

Am G#+ C/G F#7(b5omit3) Am G#+ C/G F#7(b5omit3)

5 Am G#+ C/G F#7(b5omit3) F C

26. Looking at Musical Example 18, the range of the lowest to the highest notes in the first iteration of the descending chromatic chord progression in the guitar part in “Summer Rain” and “Taurus” is much more similar than the range in the guitar part in “Stairway” is to “Taurus”. This similarity is illustrated in Musical Example 19 below, wherein measures 1 and 2 of the descending chromatic line chord progression in Section A in “Taurus” are placed over the corresponding first iteration of the descending chromatic line chord progression in “Summer Rain”. The range of the lowest to the highest notes is *identical* in these two measures in “Summer Rain” and “Taurus” as follows:

- “a” to “e”, a perfect fifth in “Summer Rain” and “Taurus”, but not in “Stairway”;
- “g#” to “e”, a minor sixth in “Summer Rain” and “Taurus”, but not in “Stairway”;
- “g” to “e”, a major sixth in “Summer Rain” and “Taurus”, but not in “Stairway”; and
- “f#” to “e”, a minor seventh in “Summer Rain” and “Taurus”, but not in “Stairway”.

MUSICAL EXAMPLE 19**"Taurus" and "Summer Rain"**

Measures 1 and 2 of the four-measure chord progressions

Top line = Section A in "Taurus" with note values halved

Lower line = Measures 1-2 in "Summer Rain"

The musical example displays two staves of music. The top staff, labeled "Taurus" Deposit Copy, shows measures 1 and 2 of a four-measure chord progression. The chords are Am, Ab+ (G#+), C/G, and Gb7 (F#7). The bottom staff, labeled "Summer Rain" 0:04, shows measures 1 and 2 of a similar progression. The chords are Am, G#+, C/G, and F#7(b5omit3). Both staves are in 4/4 time and show a descending melodic line in the first two measures.

27. Indeed, the similarities in the first two measures in the guitar parts in "Summer Rain" and "Taurus" are greater than between "Taurus" and "Stairway" as analyzed above and illustrated in Musical Example 19 above. Notably, in addition to all of the similarities presented immediately above, the upper notes in "Taurus" are confined on "e" in measures 1 and 2, as they are in measures 1 and 2 in "Summer Rain".

A. 5. MELODIC SIMILARITIES IN THE GUITAR PARTS ARE FOUND IN THREE WORKS RELEASED AFTER "TAURUS" BUT BEFORE "STAIRWAY"

"Ice Cream Dreams" by Cartoone with Jimmy Page

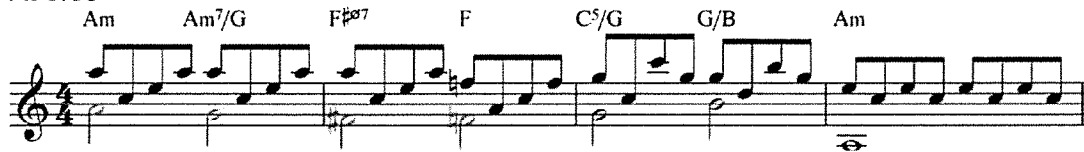
28. As transcribed in Musical Example 20 below, the guitar part in the 1968 recording³ of "Ice Cream Dreams" by Cartoone with Jimmy Page playing the guitar (attached as Track 15 on **Audio Exhibit 1**) embodies a partially chromatic descending line chord progression. The descending line notes are highlighted in red.

³ I have been informed by defendants' counsel that "Ice Cream Dreams" was recorded in the period November 1968 to December 1968 and released in 1969.

MUSICAL EXAMPLE 20**"Ice Cream Dreams" (1968)**Cartoone (with Jimmy Page on guitar) recording released in **1969**

Guitar part in the Introduction and Verse

At 0:00



29. Like "Taurus" and "Stairway", there is a descent in the lowest notes from the notes "a" through "f", but unlike "Taurus" and "Stairway" the second note is skipped. Thus, the chromatic notes are "g", "f#", "f", directly following the first note, "a". With the second chord skipped, the remaining four chords are very similar to the corresponding chords in "Stairway" as follows:

- The first chord in "Ice Cream Dreams", "Taurus", and "Stairway" is the same, "Am", and the lowest pitch of the chord is the same, "a";
- The *corresponding* next chords are very similar because the second chord in "Ice Cream Dreams", "Am7/G", includes all three pitches in third chord in "Taurus" and "Stairway", "C/G", and has the same lowest pitch, "g", and furthermore, the "Am7/G" chord in "Ice Cream Dreams" includes is the same as the corresponding "Am7/G" chord in four out of the six iterations of the chord progression under study in "Stairway" with the same lowest pitch, "g";
- The corresponding next chords in "Stairway" and "Ice Cream Dreams" are similar because the third chord in "Ice Cream Dreams", "F#ø7", includes two of the three pitches in the fourth chord in "Stairway", "D/F#", and has the same lowest pitch, "f#" and furthermore, the "F#ø7" in "Ice Cream Dreams" is the same as the corresponding chord in "Taurus";
- The corresponding next chords in "Ice Cream Dreams" and "stairway" are very similar because the fourth chord in "Ice Cream Dreams", "F", includes three of the four pitches in the fifth chord in "Stairway", "Fmaj7", and has

the same lowest pitch, “f”, and furthermore, this similarity is much greater than the similarity between the fifth chord in “Stairway” and the corresponding “f” in a non-chord in “Taurus”;

- The last two chords in the chord progression in “Ice Cream Dreams” and “Stairway” are the same, namely “G/B” and “Am” which is much more similar than the last two chords in “Taurus” and “Stairway”;
- The melodies and chord progressions under study are played on a guitar in the respective Introductions in “Ice Cream Dreams” and “Stairway”;
- The range of the notes in “Ice Cream Dreams” is more similar to the range of the notes in “Stairway” than the range of the notes between “Taurus” and “Stairway” because it is an octave or more in “Ice Cream Dreams” and “Stairway” but not in “Taurus”; and
- The descending notes are the lowest notes and are half notes in “Stairway” and “Taurus”.

30. Thus, “Ice Cream Dreams” is a notable example of a recorded song on which Jimmy Page performed and that includes similarities found between “Taurus” and “Stairway”, as well as additional similarities with “Stairway” that are not in “Taurus”.

31. As transcribed in Musical Example 21 below, the guitar part in the 1969 recording of “Thoughts” by Crow (attached as Track 16 on **Audio Exhibit 1**) embodies a four-measure chromatic descending line chord progression. The descending line notes are highlighted in red. Like “Taurus” and “Stairway”, the chromatic descent is five pitches from “a” through “f” and the descending chromatic pitches are the lowest notes in measures 1 and 2 through the first two beats of measure 3.

MUSICAL EXAMPLE 21**“Thoughts” (1969)**Crow recording released in **1969**

Guitar part in the Introduction and Verse

At 0:00

The musical notation for the guitar part of "Thoughts" (1969) is shown in two staves. The first staff contains measures 1 through 8, and the second staff contains measures 5 through 8. The chords are: Am, Am/G#, Am/G, F#m7(b5), Fmaj7, D5, E, and Am. The notes are written in a descending chromatic line across the staves.

32. As transcribed in Musical Example 22 below, the guitar part in the 1969 recording of “And She’s Lonely” by The Chocolate Watchband (attached as Track 17 on **Audio Exhibit 1**) embodies a four-measure chromatic descending line chord progression. The descending line notes are highlighted in red. Like “Taurus” and “Stairway”, “And She’s Lonely”:

- The four-measure chromatic descending line chord progression is contiguously repeated;
- The chromatic descent is from the five pitches, “a” through “f”;
- The descending chromatic pitches are the lowest pitches in measures 1 and 2 through the first two beats of measure 3;
- The first chord in “And She’s Lonely”, “Taurus” and “Stairway” is “Am”;
- The second chord in “And She’s Lonely”, “Taurus” and “Stairway” is “G#”;
- The third chord in “And She’s Lonely”, “Am/G”, includes all of the pitches in the “C/G” chord in “Taurus” and “Stairway” and same lowest pitch;
- The fourth chord in “And She’s Lonely” shares two pitches and the lowest note with “Taurus” and the lowest note with “Stairway”; and
- The fifth and final chord of the descending chromatic line in “And She’s Lonely”, “Fmaj7(omit3)”, is more similar to the fifth chord in “Stairway”, “Fmaj7”, than the “f” is in “Taurus”.

MUSICAL EXAMPLE 22**“And She’s Lonely” (1969)**The Chocolate Watchband recording released in **1969**

Guitar part throughout the Outro

Am G#+ Am/G F#7(b5omit3)

3 Fmaj7(omit3) N.C. E Am G#+

6 Am/G F#7(b5omit3) Fmaj7(omit3) N.C. E

9 Am G#+ Am/G F#7(b5omit3)

11 Fmaj7(omit3) N.C. E Am G#+

14 Am/G F#7(b5omit3) F5

A. 6. SUMMARY OF THE ANALYSIS OF MELODY

34. I found that there are no significant melodic similarities between “Taurus” and “Stairway”, but there are significant melodic differences. Most of the melodies in “Taurus” and “Stairway” are very different. A minimal melodic similarity is the chromatic descending line from “a” to “f” in measures 1, 2 and 3 in the four-measure chord progressions analyzed above. This minimal similarity is the result of the use of descending line chord progressions which were widely used in popular music prior to “Taurus”, used in classical music as early as the 17th century, and so common that they are sometimes referred to as a “minor line cliché”. The lowest notes in the first three measures of the four-measure chord progressions in Section A in “Taurus” and the opening three measures in “Stairway” move down the chromatic scale. This descending chromatic scale, a total of five notes from “a” down to “f” in the key of A minor, is a fundamental musical building block.

35. The rhythmic durations of four of the five descending chromatic notes are *different* in “Taurus” and “Stairway”. There is nothing remotely creative about the similarity of five chromatic descending notes (four of which have *different* rhythmic durations) in “Taurus” and “Stairway”.

36. Regarding the arpeggios under study in Section A in “Taurus” and the repeating measures 1, 2, and 3 in “Stairway”, the order of the notes are *different*. Even after halving the value of the notes in Section A in “Taurus” to better line them up with the notes in “Stairway”, out of a total of 27 notes in the guitar part in measures 1, 2, and 3 in the four-measure chord progression in “Stairway”, the only *itches* that align with pitches in Section A in “Taurus” are the five chromatic descending pitches (a fundamental musical building block), and a single fragmentary “e” pitch on beat 2 in measure 1. Moreover, out of 27 notes in measures 1, 2, and 3 in “Stairway”, only *two* notes have the same pitch (within the same octave), the same rhythmic duration, and the same metrical placement with Section A in “Taurus”: the single “e” eighth note on beat 2 in measure 1 and the whole note “f” in measure 3.

37. Thus, the arpeggiated melodies under study in “Taurus” and “Stairway” are different. The minimal similarity is due to the use of the commonplace descending chromatic scale, a fundamental musical building block, in which the rhythmic durations of four of the five notes are different in “Taurus” and “Stairway”.

38. In addition, any melodic similarities in “Taurus” and the guitar part in “Stairway” are found in *guitar* parts in prior art. As analyzed and transcribed in Musical Examples 11 - 19, *guitar* parts in six (6) works that predate “Taurus” include melodic similarities that are found in “Taurus” and “Stairway”. Moreover, greater melodic similarities are found between “Music to Watch Girls By”, and/or “Summer Rain” and “Taurus” than exist between the melodies in “Taurus” and “Stairway”. In addition, melodic similarities are also found in the guitar parts in three works (see Musical Examples 20 and 21 above) released after “Taurus” but before the recording of “Stairway”.

39. In summary, when combined with my findings regarding structure, harmony, and rhythm, I found that there are no significant structural, harmonic, rhythmic and/or melodic similarities, individually or in the aggregate, between “Taurus” and “Stairway”.

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BY	Deputy Clerk

FERRARA REPORT

ATTACHMENT E – ANALYSIS OF “TAURUS” AND “STAIRWAY” IN ENTIRETIES

E. 1. “TAURUS” AND “STAIRWAY” ARE VERY DIFFERENT COMPOSITIONS IN THEIR ENTIRETIES

1. “Taurus” and “Stairway” are very different compositions in their entireties. On the basis of my analysis, I found that there are no significant similarities. With respect to the two works as a whole, there are significant structural, harmonic, rhythmic, and melodic differences. Moreover, “Stairway” is a “song” with a sung vocal part and text (lyrics). “Taurus” is not a “song”.¹

E. 2. THERE ARE NO SIGNIFICANT SIMILARITIES, BUT THERE ARE SIGNIFICANT DIFFERENCES

2. On the basis of my analysis, I found that there are no significant structural, harmonic, rhythmic, or melodic similarities, individually or in the aggregate, between “Taurus” and “Stairway”. Rather, I found that there are significant structural, harmonic, rhythmic, and melodic *differences*. The harmonic similarity between “Taurus” and “Stairway” is merely the result of a commonplace descending line of notes widely used in chord progressions in popular music prior to “Taurus”, used in classical music as early as the 17th century, and so common that they are sometimes referred to as a “minor line cliché”. Similar chord progressions that appear in sixteen works that predate “Taurus” are analyzed in this report.

3. A minimal melodic similarity between “Taurus” and “Stairway” is the chromatic descending line from “a” to “f” in measures 1, 2 and 3 in the commonly used four-measure chord progressions discussed immediately above. This descending chromatic scale, a total of five notes from “a” down to “f” in the key of A minor, is a

¹ A “song” is: “A form of musical expression in which the human voice has the principal role and is the carrier of a text; as a generic term, any music that is sung....” *The Harvard Dictionary of Music*, Fourth Edition, Harvard University Press, 2003, p. 203.

fundamental musical building block. There is nothing remotely creative about the similarity of five chromatic descending notes (four of which have *different* rhythmic durations) in “Taurus” and “Stairway”.

E. 3. THE OVERALL COMPOSITIONAL TRAJECTORIES WITHIN “TAURUS” AND “STAIRWAY” ARE SIGNIFICANTLY DIFFERENT

4. The entirety of “Stairway” is marked by an unremitting increase in musical texture² and compositional complexity that develops throughout “Stairway”. The expansion of the musical texture and compositional complexity develops in parallel with an acceleration of the tempo, *i.e.*, the speed of the basic pulse of the song.

Consequently, the trajectory of the compositional development in “Stairway” from:

- The simplicity of the musical texture consisting of simple arpeggios and a “cliché” descending chromatic scale in the opening solo acoustic guitar;
- The addition of the 12-string electric guitar and electric piano at Refrain 1³,
- The addition of the bass guitar and drums at Verse 4⁴,
- The addition of both the electric guitar and a second 12-string guitar at Refrain 4⁵ and particularly in the fanfare at the Bridge⁶,
- The thick textures of the two 12-string guitars and notably increased rhythmic complexity in the lead electric guitar and bass guitar as well as the exceedingly increased melodic complexity in the lead electric guitar in the guitar Solo⁷; and

² “Texture” is being used here in terms of “spacing”, “orchestration”, and rhythm. (See “Texture” in *The Harvard Dictionary of Music*, p. 877.) “Spacing” is the high or low placement of the notes in a chord. (*Ibid.*, p. 834) and “orchestration” refers to “The art of employing instruments in various combinations....” (*Ibid.*, p. 597.)

³ At 2:14 in the sound recording and at measure 41 in **Visual Exhibit B**.

⁴ At 4:20 in the sound recording and at measure 83 in **Visual Exhibit B**.

⁵ At 4:45 in the sound recording and at measure 92 in **Visual Exhibit B**.

⁶ At 5:35 in the sound recording and at measure 110 in **Visual Exhibit B**.

⁷ At 5:56 in the sound recording and at measure 118 in **Visual Exhibit B**.

- The re-entrance of melody in the vocal part (now singing a particularly high-pitched and penetrating melody), the increase in rhythmic syncopation in the guitars and bass guitars in every second measure, and the increase in rhythmic complexity in the drums in Verse 6⁸

embodies the quintessential compositional substance of “Stairway”, a compositional substance grounded and defined by that trajectory. This trajectory and resulting compositional substance are absent in “Taurus”.

5. Specifically, following the memorable guitar fanfares in the Bridge and guitar Solo, Verse 6 in “Stairway” embodies a penultimate climax within the extraordinary trajectory of increasing musical texture and compositional complexity. The explosive re-entrance of the full-sung and high-pitched vocal melody above thickly textured and syncopated instrumentals and the compelling lyrics in Verse 6 creates a penultimate section in the compositional trajectory of “Stairway”. There is nothing remotely similar to this overall compositional trajectory or penultimate section in the composition in “Taurus”.

6. The Outro⁹ in “Stairway” returns to a steadier, less syncopated and less complex rhythm, although the texture remains thick with wide “spacing” (i.e., highs and lows in pitches). At approximately 7:41 in the sound recording (within the Outro), there is a gradual slowing of the tempo to the end of the song.¹⁰ Along with this gradual slowing of the tempo in the final measures of “Stairway” is a reduction in compositional complexity (the guitar, bass guitar, and electric piano play sustained notes and the drums drop out), diminishment of the sound, with a remarkable ending in which the title

⁸ At 6:45 in the sound recording and at measure 138 in **Visual Exhibit B**.

⁹ At 7:27 in the sound recording and at measure 156 in **Visual Exhibit B**.

¹⁰ In the “Stairway” score, a “rit.” marking is placed at measure 162 which is an abbreviation for the Italian word, “ritardando”, i.e., “Slowing down gradually”. (*The Harvard Dictionary of Music*, p. 733.)

lyrics are sung *a cappella* (i.e., without any instrumental accompaniment) while continuing to slow down the tempo. This trajectory through the Outro in “Stairway” is very different from the ending of “Taurus”.

7. By way of stark difference, the overall trajectory in “Taurus” is marked by an internal sameness and congruity between Sections A1 and A2, and between Sections B1 and B2, and within the overall compositional structure. The compositional symmetry in “Taurus” is very different from the indefatigable increase in musical texture and compositional complexity that develops throughout “Stairway” and the penultimate compositional climax of voice and instruments in Verse 6. That compositional substance is unmistakably absent in “Taurus”.

E. 4. THE LYRICAL MEANINGS ARE VERY SUBSTANTIAL IN THE OVERALL “STAIRWAY” COMPOSITION BUT THERE ARE NO LYRICS IN “TAURUS”

8. The lyrical meanings in “Stairway” are very substantial in the overall composition, but there are no lyrics (i.e., sung or spoken words) at all in “Taurus”. While a detailed analysis of the lyrics in “Stairway” is not warranted, a preliminary analysis of the lyrics within the context of the composition as a whole is warranted. The complete lyrics in “Stairway” are included in **Visual Exhibit B**.

9. Immediately following the Introduction played by the acoustic guitar and recorders, the vocal melody enters (joining the acoustic guitar and recorders) with the opening of Verse 1 in “Stairway” that starts with the lyrics:

“There’s a lady who’s sure
all that glitters is gold
and she’s buying a stairway to heaven.”

The meaning of this lyrical opening defies reality insofar as it identifies an imaginary “stairway” that reaches “heaven”. It also suggests that this “lady” is “sure” that wealth can “buy” her the unreal “stairway to heaven”. Continuing in the same Verse are the

lyrics: "...she knows if the stores are all closed with a **word** she can get what she came for...and she's buying a stairway to heaven". What is the "word" that enables the "lady" to "get what she came for"? We are not given an answer. Instead, the lyrics continue: "... 'cause you know sometimes words have two meanings". The Verse ends with the lyrics:

"In a tree by the brook
there's a songbird who sings
sometimes all of our thoughts are misgiven."

10. This wonderment about what we really know is the substance of the Refrain lyrics, "Oo, it makes me wonder, Oo, it makes me wonder." In "Stairway", the repeating Refrain lyrics – "it makes me wonder" – simply but powerfully articulate a state of wonderment.

11. The lyrics in Verses 2 and 3 sing of "looking to the west", "leaving", and following "the tune" through which "the piper will lead us to reason and a new day will dawn...and the forests will echo with laughter". Here there is a call for transcendence and spiritual enlightenment, perhaps leaving a view of life that "all that glitters is gold", and transcending to the "forests" where "a songbird's" song may speak the greater truth, above "our thoughts".

12. Verse 4 in "Stairway" is remindful of Robert Frost's poem, "The Road Not Taken". The lyrics in Verse 4 of "Stairway" include:

"Yes, there are two paths you can go by
but in the long run
(and) there's still time to change the road you're on."

13. After another "And it makes me wonder" lyric in Refrain 4, the lyrics in Verse 5 add that "...the piper's calling you to join him" and end with:

“Dear lady, can you hear the wind blow
and did you know
your stairway lies on the whisp’ring wind.”

Once again, the overall lyrical message appears to point “the lady” (perhaps representing us, the listeners) to nature, to spiritual enlightenment, and away from the materialism symbolized by glittering gold.

14. As analyzed above, coupled with these lyrical meanings is an increasing textural and rhythmic complexity. Immediately following Verse 5 and the lyrics, “...did you know your stairway lies on the whisp’ring wind”, the voice drops out and a very memorable instrumental fanfare (in the Bridge) highlighted by guitars seems to announce that something significant was just relayed and something significant is about to commence. This fanfare-like Bridge is followed by the extraordinary guitar Solo section, which adds still greater rhythmic and melodic complexity to the overall compositional trajectory in “Stairway”.

15. The guitar Solo is followed by Verse 6, which as analyzed above, embodies a penultimate climax of the extraordinary trajectory of increasing musical texture and compositional complexity. The explosive re-entrance of the full-sung and high-pitched vocal melody above thickly textured and syncopated instrumentals is coupled with the compelling lyrics:

“And as **we** wind on down the road
our shadows taller than **our** soul
There walks a lady **we** all know
who shines white light and wants to show
how ev’rything still turns to gold.

Importantly, here the lyrics place the singer and the audience of his song in the first person with two iterations of the words, “we” and “our”, as emphasized immediately

above, rather than the Refrain lyrics, "It makes *me* wonder". Like the song's imaginary opening "stairway" that reaches "to heaven", the metaphorical meaning of "...our shadows taller than our soul" defies reality.

16. The final lyrical lines in Verse 6 suggest that the overall lyrical message of the song is about finding spiritual enlightenment: "And if you listen very hard, the tune will come to you at last". This "tune" played by the piper is in an Eastern philosophical key in the next line: "When all are one and one is all..." This gives a sense of the Eastern vision of oneness, in which all beings are "one" like drops that are part of an infinite ocean. The final lyrical phrase, "to be a rock, and not to roll" could be regarded as a clever play on "rock and roll"; it could also be interpreted as calling for the steadfastness and restfulness of a rock that withstands the (material) challenges of life. In this way, Verse 6 embodies the compositional climax of the lyrics and music, which constitute the "Stairway" composition.

17. As analyzed above, at approximately 7:41 in the sound recording within the Outro section, there is a gradual slowing of the tempo to the end of the song. Along with this gradual slowing of the tempo in the final measures of "Stairway" is a drastic reduction in compositional complexity (the guitar, bass guitar, and electric piano play sustained notes and the drums drop out) and a diminishment of the sound. Within this dramatic reduction is a reprise of a portion of the opening lyrics of the song, namely: "And she's buying a stairway to heaven" in which the last three or four words are sung *a cappella* while continuing to slow down the tempo.

18. By way of substantial difference, there are no lyrics in "Taurus". The indelibly connected compositional development and trajectory of the lyrics and music in "Stairway" are completely absent in "Taurus".

E. 5. SUMMARY OF THE ANALYSIS OF "TAURUS" AND "STAIRWAY" IN THEIR ENTIRETIES

19. "Taurus" and "Stairway" are very different compositions in their entirety. On the basis of my analysis, I found that there are no significant similarities, but there are significant structural, harmonic, rhythmic, and melodic differences. Moreover, "Stairway" is a "song" with a sung vocal part and text (lyrics). "Taurus" does not embody a "song".

20. The overall compositional trajectories within "Taurus" and "Stairway" are significantly different. The entirety of "Stairway" is marked by an unremitting increase in musical texture and compositional complexity that develops through the song. The expansion of the musical texture and compositional complexity develops in parallel with an acceleration of the tempo, i.e., the speed of the basic pulse of the song, and meaningful lyrics. The extraordinary compositional development and trajectory, meaningful lyrical message, and compositional substance in "Stairway" are absent in "Taurus".

FERRARA REPORT**ATTACHMENT F – VALUE ASSESSMENT****F. 1. VALUE ASSESSMENT OF THE MUSIC IN “STAIRWAY” THAT IS SIMILAR TO “TAURUS”**

1. In this Attachment, quantitative and qualitative value assessments of the music in “Stairway” that is similar to music in the composition embodied in “Taurus” is presented. As analyzed above, the similarities between “Taurus” and “Stairway” occur in the following portions of “Stairway”:

Introduction from 0:00 – 0:09 and 0:13 – 0:22 (see mm. 1 – 3 and 5 – 7 in **Visual Exhibit B**);

Verse 1 from 0:54 – 1:03; 1:07 – 1:16; and 1:47 – 1:56 (see mm. 17 – 19, 21 – 23, and 33 – 35 in **Visual Exhibit B**); and

Interlude from 2:01 – 2:10 *in varied form* (see mm. 37 – 39 in **Visual Exhibit B**).

2. Thus, 18 measures out of a total of 166 measures in “Stairway” contain similarities to “Taurus”. These 18 measures in “Stairway” consist of six iterations of three measures played on acoustic guitar and recorders as transcribed in **Visual Exhibit B**. Notably, while these 18 measures in “Stairway” contain music that is similar to “Taurus”, these 18 measures also contain music that is different from “Taurus”.



3. The transcription of the entirety of music in “Stairway” in **Visual Exhibit B** consists of a total of 29 pages. Looking at page 1 in the “Stairway” score, there are eleven (11) designated parts (e.g., Voice, Recorders, Acoustic Guitar, Electric Piano, Bass, Drums, etc.). The unbroken vertical line at the far left, from top to bottom of this “grand staff”, indicates that any notes written in these eleven parts are played simultaneously. Measure numbers (starting with measure #4) are above the first measure on the left side of each grand staff. Structural sections (such as “Intro”, “Verse

1", "Refrain 1", etc.) are demarcated in rectangular boxes above the first full measure of a section. The commencement of each section in the sound recording is also listed in the rectangular boxes beginning with "Verse 1" on page 2 of the score.

4. Thick, double slanted lines mark off a new grand staff, for example, near the bottom of page 1. After the first grand staff in the top part of page 1, only parts that are actually playing or singing are included in a grand staff. Thus, even though the acoustic guitar 1 is the only instrument playing at the beginning of "Stairway", all eleven parts are listed to establish all of instruments that are played in "Stairway". After that first grand staff, if a particular instrument is not playing, it is omitted from the grand staff. Thus, in the grand staff at the bottom of page 1, only the recorders and acoustic guitar 1 are included because they are the only instruments that are playing during those measures.

5. During the 18 measures in "Stairway" that embody similarities to "Taurus", in addition to the acoustic guitar and recorders, the voice part enters in Verse 1 and is present during 12 of the measures in "Stairway" with similarities to "Taurus". However, the melody in the voice part in "Stairway" is different from the melody in "Taurus".

6. In the "Stairway" score, an "x" note head indicates that there is no definitive pitch such as in percussion parts,¹ or that the pitch is muted such as in the 12-String guitar 2 and 3 in measures 138 – 152.

¹ A "pitch" is the highness or lowness of a sound. Insofar as there are no clef signs (e.g.,  or  signs) at the beginning of each line of music in the percussion instruments in **Visual Exhibit B**, customary practices in scoring (i.e., creating transcriptions) utilize rounded note heads (not "x's") for the rhythms in some percussion parts. Without a clef at the beginning of a line of music, a rounded note head does not indicate a pitch. A log or "legend" of each of the parts in the drums in "Stairway" is attached as **Visual Exhibit O**.

F. 2. QUANTITATIVE ANALYSIS OF THE VALUE OF MUSIC IN “STAIRWAY” THAT IS SIMILAR TO “TAURUS”

7. A quantitative value assessment provides an objective measurement of music in an entire work, or a portion thereof. The first step is to count the total number of notes in the musical work under study. This is easily done by using “Sibelius” musical notation software, through which the “Stairway” score in **Visual Exhibit B** was created.² The “Stairway” score in **Visual Exhibit B** embodies all of the music in the entirety of the musical composition in “Stairway”. There are a total of **11,104** note heads (pitched in all instruments and in the vocal melodies, and un-pitched in the drums).³

8. For the purposes of a purely quantitative analysis, there is no distinction between the “value” of any note or set of notes in relation to any other notes. Such a distinction, for example, between the “value” of notes in a guitar melody as compared with notes in a guitar chord or melodic notes sung by a singer are not made in a quantitative analysis, rather, they are made in a *qualitative* analysis. That analysis is provided later in this report. Importantly, a purely quantitative analysis provides an empirically corroborable measurement of the music at issue, and upon which a *qualitative* analysis can later be grounded. The quantitative measurement provides a reference point.

² In keeping with musicological practices, in order to transcribe the notes in “Stairway”, the sound recording is placed in a software program such as “Apple Quick Time” which enables portions of the sound recording to be “looped” (*i.e.*, automatically played over and over) and slowed down. Using this method and a piano to check the notes, each note and rest are input into the Sibelius program using a computer keyboard. The “Stairway” score in its entirety in **Visual Exhibit B** was created using this method. These transcription scores provide empirically corroborable representations of the respective *compositions* embodied in “Taurus” and “Stairway”.

³ This total number of note heads excludes “tied” notes, “grace” notes (*i.e.*, ornamental miniature sized notes in the score), “ghost” notes (snare drum attacks that are barely discernible, see **Visual Exhibit M**), “x” note heads in the guitar (which indicate muted notes), and guitar notes that are in parentheses (which indicate strings that are not plucked but resonate sympathetically at a very low volume).

9. There are a total of **248** note heads in the portion of “Stairway” with similarities to “Taurus” as analyzed earlier in this report (consisting of the acoustic guitar and recorders during 18 measures). Consistent with the counting of the total number of notes in the “Stairway” score in its entirety, the 248 note heads excludes “tied” notes, a single “grace” note in measure 4, two notes within parentheses in measure 4 (the third such note is also a “tied” note) which are not plucked but resonate sympathetically with the other notes at a very low volume, and a single “x” note head in measure 37.

10. Therefore, the result of my quantitative value assessment is that **2.23%** of the *music* in “Stairway” embodies similarities to “Taurus” as analyzed throughout this report, and as transcribed in **Visual Exhibits A and B**.

11. The lyrics in “Stairway” are *not* counted in this quantitative analysis because there are no lyrics in “Taurus”. However and importantly, the lyrics constitute a substantial portion of the overall composition in “Stairway”. The quantitative measurement of 2.23% only represents 2.23% of the *musical composition* in “Stairway” with similarities to “Taurus”, *not* the whole (musical *and* lyrical) “Stairway” composition. While the musical and lyrical composition in “Stairway” can be identified separately for the purpose of analysis, the musical and lyrical compositions in “Stairway” are indelibly bound in the “Stairway” composition.

F. 3. QUALITATIVE ANALYSIS OF THE VALUE OF MUSIC IN “STAIRWAY” THAT IS SIMILAR TO “TAURUS”

12. Some parts in a musical composition can be more qualitatively valuable than other music in the same composition. For example, if the music in “Stairway” that is similar to “Taurus” includes one or more of the most memorable parts of “Stairway”, such a qualitative finding would increase the purely 2.23% quantitative value.

13. In addition, melodic notes tend to be more valuable than notes that fill out a chord. However, notes that fill out a chord could embody qualitatively important rhythms and could impact on the musical texture. This is certainly the case in the notes

in the guitar chords in “Stairway” which embody increasing textural and rhythmic complexity. Nonetheless, the melodies played on the guitar and those that are sung tend to be of greater qualitative value than notes that are only part of a chord.

14. Importantly, a qualitative assessment is grounded in the understanding that each part of a composition – such as an Introduction, Verse, Refrain, Bridge, etc. – does not function by itself, but rather functions as a part of the overall composition. Each musical work is marked by its compositional trajectory from beginning to end. In assessing the value of the music in “Stairway” that is similar to “Taurus”, a *qualitative* analysis assesses the *value* of that portion of “Stairway” within the trajectory of the overall musical and lyrical composition in “Stairway” as a whole.

15. On the basis of my analysis, I found that the (1) Introduction (which includes music that is similar to “Taurus”), (2) the guitar fanfare in the Bridge⁴, (3) the guitar Solo⁵ (which does not include music that is similar to “Taurus”), and (4) the climactic Verse 6⁶ (which does not include music that is similar to “Taurus”) are the most memorable parts in “Stairway”. Insofar as the Introduction includes music that is similar to “Taurus”, the purely *quantitative* value (2.23%) of the portion of “Stairway” that is similar to “Taurus” would be *increased*. Similarly, the purely *quantitative* values of the

⁴ There are a total of 635 note heads in the Bridge section of “Stairway”. Consistent with the counting of the total number of note heads in the “Stairway” score in its entirety, this total number of note heads excludes “tied” notes, “grace” notes, notes within parentheses in measure 4, and “x” note heads. Therefore, on a purely quantitative basis, **5.71%** of “Stairway” is constituted of the music in the Bridge section.

⁵ There are a total of 2,797 note heads in the guitar Solo section of “Stairway”. Consistent with the counting of the total number of note heads in the “Stairway” score in its entirety, this total number of note heads excludes “tied” notes, “grace” notes, notes within parentheses in measure 4, and “x” note heads. Therefore, on a purely quantitative basis, **25.18%** of “Stairway” is constituted of the music in the guitar Solo section.

⁶ There are a total of 1,862 note heads in Verse 6 of “Stairway”. Consistent with the counting of the total number of note heads in the “Stairway” score in its entirety, this total number of note heads excludes “tied” notes, “grace” notes, notes within parentheses in measure 4, and “x” note heads. Therefore, on a purely quantitative basis, **16.76%** of “Stairway” is constituted of the music in Verse 6.

music in (1) the Bridge (5.71% of "Stairway", see footnote 4), (2) the guitar Solo section (25.18% of "Stairway", see footnote 5) and (3) Verse 6 (16.76% of "Stairway", see footnote 6) would be increased due to the fact that they are amongst the most memorable parts in "Stairway".

16. The music in the acoustic guitar in the Introduction and in later iterations is harmonic, rhythmic, and melodic, which would further *increase* the purely quantitative value above 2.23% of the *musical* (not lyrical) "Stairway" composition. The music in the recorder parts functions as a background that supports the guitar part without adding any important new melody or harmony. On the other hand, the recorders provide a memorable "early music" style and countenance, which adds qualitative value.

III. C. COMBINED QUANTITATIVE AND QUALITATIVE ANALYSIS OF THE VALUE OF MUSIC IN "STAIRWAY" THAT IS SIMILAR TO "TAURUS"

17. As reported above, the result of my *quantitative* value assessment is that **2.23%** of the *music* in "Stairway" embodies similarities to "Taurus" as analyzed throughout this report

18. On the basis of a qualitative analysis, there are two qualitative grounds for *increasing* the 2.23% strictly *quantitative* value of the music in "Stairway" that is similar to "Taurus", namely, (1) it embodies a melody, chord progression, and rhythms in the guitar part along with the "early music" style of the recorders" and (2) it is part of one of the most memorable parts in "Stairway".

19. On the other hand, there are three sections of "Stairway" that do *not* embody music that is similar to "Taurus", yet *each* of these sections is at least as equally memorable as the Introduction, namely, (1) the guitar fanfare in the Bridge, (2) the guitar Solo, and (3) Verse 6, and these sections embody melodies, chord progressions, and rhythms in music that is different from "Taurus". The purely quantitative value of each of these three memorable sections in "Stairway" would be

increased due to their qualitative value, thereby, limiting the qualitative increase of the quantitative value of the music in “Stairway” that *is* similar to “Taurus”.

20. As noted above, the 2.23% quantitative value represents 2.23% of the *musical* composition in “Stairway”, *not* the whole (musical *and* lyrical) “Stairway” composition. However, presenting a specific percentage increase over the purely quantitative 2.23% value is outside of the bounds of this analysis. Instead, the combined quantitative and qualitative analysis herein seeks to provide (1) an empirically corroborable measurement that is a reference point and (2) a qualitative analysis that can aid in the assessment of any increase or decrease in the quantitative measurement.

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Michael Skidmore, etc.

vs. Led Zeppelin, et al.

DEFENDANT'S EXHIBIT 2092-8

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____

Deputy Clerk

APPENDIX 1

APPENDIX 1

**LAWRENCE FERRARA, Ph.D.
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M.M.	Music	Manhattan School of Music
Ph.D.	Music	New York University

Teaching Background

1979-84	Assistant Professor of Music	New York University
1984-92	Associate Professor of Music, Tenured	New York University
'92-present	Professor of Music	New York University
1995-2006	Professor of Music and Department Chair	New York University
2006-2011	Professor of Music and Director Music & Perf Arts	New York University
2011 (Sept.)-present	Professor of Music and Director Emeritus	New York University

Selected Professional Activities

Cambridge,
Mass: 2016, invited lecture on music copyright at Harvard University Law School, class on Music and Media law (2/1/2016)

Cambridge,
Mass: 2015, invited lecture on music copyright at Harvard University Law School,
class on Music and Media law

New York: 2015, American Musicological Society GNY, invited to present and
participate on a panel hosted by The Juilliard School at Lincoln Center
regarding "Changes in Music Delivery and Reception in the 21st Century"

Cambridge,
Mass: 2014, invited lecture on music copyright at Harvard University Law School,
class on Music and Media law

New York: 2014, invited music copyright presentation at Columbia University Law
School, class on Federal Courts Litigation: Trademark and Copyright

New York: 2014, American Musicological Society GNY, peer-reviewed presentation
on musicological issues regarding the composition embodied in a sampled
portion of a sound recording in music copyright claims

New York: International Double Reed Society Conference, invited presentation on
the musicological elements and implications in *Newton v Diamond*

Cambridge,
Mass: 2013, invited lecture on music copyright at Harvard University Law School,
class on Music and Media law

New York: 2013, invited music copyright presentation at Columbia University Law
School, class on Federal Courts Litigation: Trademark and Copyright

New York: 2013, American Musicological Society GNY, peer-reviewed presentation
including an analysis of the musical composition in "The Phantom Song"
from *Phantom of the Opera* by Andrew Lloyd Webber

New York: 2012, invited music copyright presentation at Columbia University Law
School, class on Federal Courts Litigation: Trademark and Copyright

Cambridge,
Mass: 2012, invited lecture on music copyright at Harvard University Law School,
class on Music and Media law

Sweden: 2011, interviewed (in New York) and featured in the Swedish TV series, "The Story Behind the Hit Song," regarding music copyright

Cambridge,
Mass: 2011, invited lecture on music copyright at Harvard University Law School, class on Music and Media law

New York: 2010, invited presenter and moderator of a panel on sampling and music copyright for The Copyright Society of the United States, New York Chapter

New York: 2010, invited music copyright presentation at Columbia University Law School, class on Federal Courts Litigation: Trademark and Copyright

Montclair,
NJ: 2010, invited to present the Inaugural Jack Sacher Memorial Research Lecture for the opening of the new John Cali School of Music at Montclair State University

New York: 2010, invited to present a lecture on music copyright followed by a dialogue with Academy Award winner, F. Murray Abraham, for The Pathfinders Series at The First Presbyterian Church of New York City

New York: 2008, invited music copyright presentation at Columbia University Law School, class on Federal Courts Litigation: Trademark and Copyright

Denmark: 2007, interviewed in documentary film on music copyright (*Copy Good, Copy Bad*)

Ireland: 2007, interviewed on Irish radio regarding music copyright

New York: 2007, Opening and Closing Speaker for a Conference co-sponsored by The New York Philharmonic and the Finnish Consulate on Music Learning and Performance in Finland

New York: 2006, invited panelist at the CMJ Conference at Lincoln Center regarding music copyright

New York: 2006, invited panelist at the Remix Conference regarding music copyright

- New York: 2006, invited presentation to the New York Institute for the Humanities regarding music copyright
- New York: 2006, invited Keynote Address for The Mastery of Music Teaching Conference sponsored by The Metropolitan Opera Guild and The New York Philharmonic
- Washington
D.C.: 2005, invited panelist/presenter at the Future of Music Policy Summit regarding music copyright
- New York: 2005, invited panel and group discussion leader at the United Nations regarding rhythm in the music of multiple cultures as part of the U.N.'s World Summit on the "Information Society" and the United Nations Information and Communications Technology Task Force
- Cambridge,
Mass.: 2005, invited panelist/presenter at Harvard University Law School's Berkman Center, in a national conference regarding technology and intellectual property
- New York: 2005, invited music copyright presentation at Columbia University Law School, class on Federal Courts Litigation: Trademark and Copyright
- Los
Angeles: 2005, invited lecture regarding music copyright in Los Angeles for an NYU Alumni event
- Orlando: 2005, invited lecture regarding music copyright in Orlando, Florida for an NYU Alumni event
- Hawaii: 2004, invited workshop presentation and session chair regarding methodology inherent in the analysis of a J. S. Bach organ prelude for the International Conference on Arts and the Humanities
- Norway: 2003, invited series of lectures on music theory and analysis co-sponsored by the Music Theory and Composition Departments of the Norwegian Music Academy and the Department of Philosophy of the University of Oslo

New York: 2001, invited presentation and Chair of a panel at The United Nations regarding "Music within a Global Context."

Pisa, Italy: Summer 1993 & Summer 1994, Visiting Professor at University of Pisa
Pianist Performed solo recitals and performances as an accompanist and soloist in the United States and Europe as well as solo performances on radio and television. Recordings for Orion Master Recordings and Musique International. Performed as a pianist in musical theatre shows, rehearsal pianist in operas, accompanist to internationally acclaimed singers, and as a session pianist in pop styles.

At New York University's Steinhardt School in the Department of Music and Performing Arts: Director of Music Performance Programs from 1980-1985, Director of Ph.D. Programs from 1986-1995, Chair of the Department from 1995 – 2005, and Director of all Music and Performing Arts studies (undergraduate through Ph.D.) in The Steinhardt School at New York University from 2006-2011. Named "Director Emeritus" of Music and Performing Arts in The Steinhardt School in 2011. Currently on the full-time faculty in music theory and music history.

Currently a member of the Editorial Board of the journal *Music and Moving Image* (University of Illinois Press) and on the board of Editorial Consultants for the journal *Philosophy of Music Education Review* (Indiana University Press).

Awards

1972	Stoekel Fellowship, Yale University Graduate School of Music, Chamber Music
1985	Presidential Research Fellowship, NYU
1988	Federal Grant for Research
1989	Federal Grant for Research renewed
1996	Daniel E. Griffiths Award for work regarding Arthur Schopenhauer's theory of music published by Cambridge University Press, 1996.

Membership in Professional Organizations

American Musicological Society

New England Conference of Music Theorists

Society for Music Theory

Publications: Books

Ferrara, Lawrence *Philosophy and the Analysis of Music: Bridges to Musical Sound, Form and Reference* (Greenwood Press) 1991

Ferrara, Lawrence and
Kathryn E. Ferrara *Keyboard Harmony and Improvisation* (Excelsior Music Publishers) 1986

Phelps, Roger, Lawrence
Ferrara and Thomas
Goolsby *Guide to Research in Music Education*, Fourth Edition.
(Scarecrow Press/The Rowman & Littlefield Publishing Group) 1993

Phelps, Roger, Lawrence
Ferrara, et al *Guide to Research in Music Education*, Fifth Edition
(Scarecrow Press/The Rowman & Littlefield Publishing Group) 2005

Courses Taught at NYU

Aesthetic Foundations of the Arts:	for Ph.D. students
Aesthetic Inquiry:	for Ph.D. students
Arts Heritage and Criticism:	for M.M. students
Classic Era Music, Analysis:	for M.M. students
Contemporary Music, Analysis:	for M.M. and Ph.D. students
Dissertation Proposal Seminar:	for Ph.D. students
Keyboard Harmony and Improvisation:	for B.M. students
Music Copyright, Landmark Cases:	for B.M. students

Music Criticism:	for M.M. students
Music History III, 19 th Century:	for B.M. students
Music History IV, 20 th & 21 st Century:	for B.M. students
Music Performance Practices:	for M.M. students
Music Reference & Research Methods:	for M.M. and Ph.D. students
Music Theory and Analysis:	for B.M. students
Seminar in Music Theory & Analysis:	for M.M. and Ph.D. students

Music Copyright

Dr. Ferrara has been a music expert in music copyright issues for more than twenty years, providing opinions for plaintiffs and defendants. He is an active music copyright consultant for record, music publishing, and motion picture companies, and for individuals in the United States and abroad. He has been an invited guest lecturer in music copyright at Columbia University Law School and Harvard University Law School (regarding the latter, in six of the last six years). He has also been a conference panelist sponsored by Harvard Law School, and a panel moderator for The Copyright Society of the United States.

Deposition or Trial Testimony in the last four years

- (1) Batts et al v. Adams et al in 2011;
- (2) Francescatti v. Germanotta et al in 2013;
- (3) Marino v. Usher et al in 2013;
- (4) Roberts et al v. Gordy et al in 2014;
- (5) Roberts et al v. Gordy et al in 2015; and
- (6) Fahmy v. Shawn Carter et al in 2015.

Fee rates for Professional Services

- \$395 per hour for research, analysis, preparation of reports, and meetings plus any travel-related expenses

- \$475 per hour for deposition and trial testimony plus travel-related time and expenses

VISUAL EXHIBIT

A

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. Led Zeppelin, et al.

DEFENDANT'S EXHIBIT 2092-9

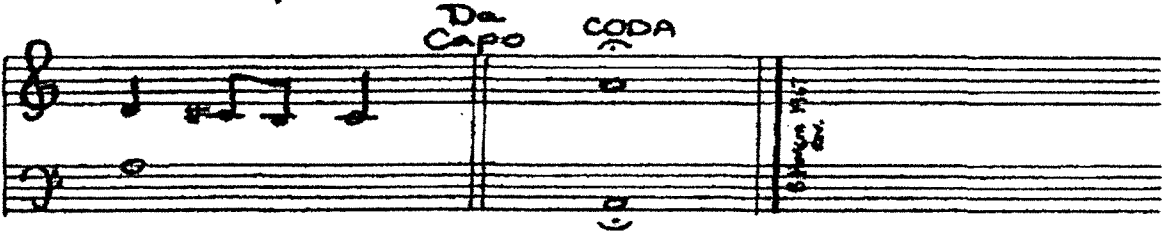
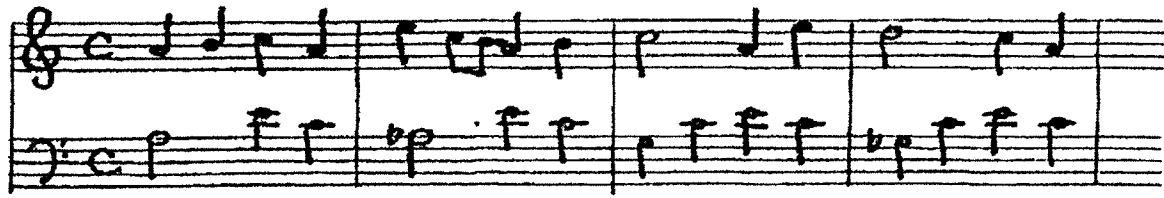
DATE _____ IDEN.

DATE _____ EVID.

BY _____
Deputy Clerk

TAURUS

by RANDY EU 35222
CALIFORNIA



HOLLENBECK MUSIC CO
(c) 1967

EU 1567

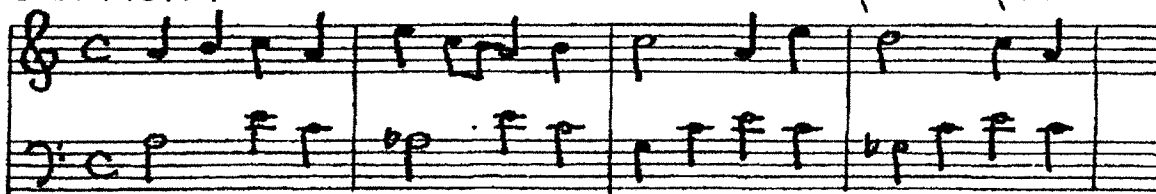
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TAURUS

by RANDY EU 35222

CALIFORNIA

Section A1 (and A2 after the "Da Capo" repeat)



Section B1 (and B2 after the "Da Capo" repeat)

Hollenbeck Music Co
(c) 1967

VISUAL EXHIBIT B

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-10

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____
Deputy Clerk

Stairway to Heaven

INTRO (0:00)

♩ = 72

Am G#+ C/G D/F# Fmaj7

Voice

Recorders

Acoustic Guitar 1

Electric Guitar 1

Electric Guitar 2

12-string Guitar 1

12-string Guitar 2

12-string Guitar 3

Electric Piano

Bass

Drums

4 G/B Am Am G#+ Am7/G D/F# Fmaj7 G/B Am

Rec.

A. Gtr. 1

2

9 C D Fmaj7 Am C G D

Rec.

A. Gtr. 1

13 C D Fmaj7 Am C D

Rec.

A. Gtr. 1

16 Fmaj7 Am G# C/G D/F#

VERSE 1 (0:54)

Voice

There's a la- dy who's sure all that glit- ters_ is gold and she's

Rec.

A. Gtr. 1

19 Fmaj7 G/B Am Am G# Am7/G D/F#

Voice

buy - ing. a stair-way to heav en. When she gets there she knows if the stores are all closed with a

Rec.

A. Gtr. 1

23 Fmaj7 3 G/B Am C D Fmaj7 Am

Voice
word she can get what she came_ for. Oo, oo, and she's

Rec.

A. Gtr. 1

27 C G D C D 3 Fmaj7 Am

Voice
buy- ing a stair- way_ to heav - en_ There's a sign on the wall but she wants to be sure 'cause you

Rec.

A. Gtr. 1

31 C 3 D Fmaj7 3 Am G#+

Voice
know some- times words have two mean- ings In a tree by the brook there's a

Rec.

A. Gtr. 1

4

34 Am⁷/G D/F# Fmaj⁷ G/B Am

Voice

song - bird who sings, some-times all of__ our thoughts are mis- giv- en.

Rec.

A. Gtr. 1

37 Am G# Am⁷/G D/F# Fmaj⁷ G/B Am G/B

Rec.

A. Gtr. 1

INTERLUDE (2:01)

41 Am⁷ D⁹(sus4) D Am⁷ Am¹¹

Voice

Oo, _____ it makes me won- der.____

A. Gtr. 1

12-Str. 1

E. Pno.

REFRAIN 1 (2:14)

♩ = 79

44 D⁶ Am⁷/D D⁶ Am⁷ D⁹(sus4) D

Voice: Oo, _____ makes me won - der.

A. Gtr. 1

12-Str. 1

E. Pno.

47 Am⁷ Am¹¹ D⁶ Am/D D⁶ C G/B Am

VERSE 2 (2:40)

Voice: There's a feel- ing I get when I look to the west, and my

A. Gtr. 1

12-Str. 1

E. Pno.

51 C G/B Fmaj7 Am C G/B Am

Voice: spir- it is cry- ing for leav- ing. In my thoughts I have seen rings of smoke through the trees, and the

A. Gtr. 1

12-Str. 1

E. Pno.

6

55 C G/B Fmaj7 Am7 G/B C G/B

Voice
voic- es of those who stand look - ing

A. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

REFRAIN 2 (3:07)

♩=82

58 Am7 D9(sus4) D

Voice
Oo... it makes me won - der

A. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

60 Am7 Am11 D6 Am/D D6

A. Gtr. 1

12-Str. 1

E. Pno.

62 Am⁷ D⁹(sus4) D

Voice: Oo, (it) real-ly makes me won - der.

A. Gtr. 1

12-Str. 1

E. Pno.

64 Am⁷ Am¹¹ D⁶ Am/D D⁶

Voice: And it's

A. Gtr. 1

12-Str. 1

E. Pno.

VERSE 3 (3:30)

66 ♩=83 C G/B Am C G/B Fmaj⁷ Am

Voice: whis-pered that soon_ if we all call the tune then the pip- er will lead us to rea - son And a

A. Gtr. 1

12-Str. 1

E. Pno.

8

70 C G/B Am C G/B Fmaj7

Voice

new day will dawn for those who stand long and the for- ests will e- cho with laugh-

A. Gtr. 1

12-Str. 1

E. Pno.



73 Am C G/B

Voice

ter,

A. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.



REFRAIN 3 (3:57)

75 Am7 D9(sus4) D

A. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

77 Am⁷ Am¹¹ D⁶ Am/D D⁶ Am¹¹ D⁹(sus4)

A. Gtr. 1

12-Str. 1

E. Pno.

80 D Am⁷ Am¹¹ D⁶ Am/D D⁶

Voice

Oh...

A. Gtr. 1

12-Str. 1

E. Pno.

Dr.

10

VERSE 4 (4:20)

♩=85

83 C G/B Am C G/B Fmaj7

Voice

If there's a bus-tle in your hedge - row don't be a-larmed now, It's just a spring clean for the May

A. Gtr. 1

12-Str. 1

E. Pno.

Bass

Dr.



86 Am C G/B

Voice

queen. Yes, there are two paths you can

A. Gtr. 1

12-Str. 1

E. Pno.

Bass

Dr.

88 Am C G/B fmaj7 11

Voice
go by, but in the long run, (and)there's still time to change the road

A. Gtr. 1

12-Str. 1

E. Pno.

Bass

Dr.

90 Am C G/B Am⁷ D⁹(sus4)

REFRAIN 4 (4:45)

Voice
you're on...

A. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

12

93 D Am⁷ Am¹¹ D⁶ Am/D D⁶

Voice And it makes me won - der.

A. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

96 Am⁷ D⁹(sus4) D

Voice Oh...

A. Gtr. 1

E. Gtr. 2

12-Str. 1

E. Pno.

Bass

Dr.

98 Am⁷ Am¹¹ D⁶ Am/D D⁶

Voice

A. Gtr. 1

E. Gtr. 2

12-Str. 1

E. Pno.

Bass

Dr.

14

100 **VERSE 5 (5:08)**

C G/B Am C G/B Fmaj7

Voice
Your head is hum-ming and it won't go in case you don't know, the pip-er's call-ing you_ to join

A. Gtr. 1

E. Gtr. 2

12-Str. 1

E. Pno.

Bass

Dr.

The musical score for Verse 5 (5:08) is presented across seven staves. The top staff is for the Voice, with lyrics: "Your head is hum-ming and it won't go in case you don't know, the pip-er's call-ing you_ to join". Above the voice staff, the chords C, G/B, Am, C, G/B, and Fmaj7 are indicated. The staves below are for A. Gtr. 1, E. Gtr. 2, 12-Str. 1, E. Pno., Bass, and Dr. The guitar parts (A. Gtr. 1, E. Gtr. 2, 12-Str. 1) feature a melodic line with eighth and sixteenth notes. The piano part (E. Pno.) consists of a simple harmonic accompaniment. The bass part (Bass) provides a steady bass line. The drum part (Dr.) features a consistent rhythmic pattern of eighth notes.

103 Am C G/B

Voice
him. Dear la- dy, can you hear the wind

A. Gtr. 1

E. Gtr. 2

12-Str. 1

E. Pno.

Bass

Dr.

105 Am C G/B f#maj7

Voice
blow, and did you_ know your stair-way lies on the whis-

A. Gtr. 1

E. Gtr. 2

12-Str. 1

E. Pno.

Bass

Dr.

16

107 Am C G/B D⁷

Voice p'ring wind Oh.

A. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

BRIDGE (5:35)

♩=90

110 D(sus2) D D(sus4) D(sus2) D D(sus4) D(sus2) D D(sus4) D C(add9)

A. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.



112 C9(#11) C(add9) C9(#11) C(add9) D(sus2) D D(sus4) D(sus2) D D(sus4)

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

18

115

D(sus2) D D(sus4) D C(add9) C⁹(#11) C(add9) G⁶/B

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.



SOLO (5:56)

♩=98

118 Am C/G Fmaj7

E. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

120

Am C/G Fmaj7 Am C/G

E. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

123

Fmaj7 Am C/G Fmaj7

E. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

20

Am 126 8^{va} C/G pmaj7

E. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

Am 128 8^{va} C/G pmaj7

E. Gtr. 1

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

130 Am C/G pmaj7 21

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

132 Am C/G pmaj7 Am C/G

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

22

135 Fmaj7 Am C/G

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.



137 Fmaj7 8va

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

E. Pno.

Bass

Dr.

VERSE 6 (6:45)

138 Am $\text{J}=102$ F G G 23

Voice

And as we wind_on down the road our shad-ows tall-er than our soul

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

Bass

Dr.

141 F G Am G F G

Voice

There walks a la- dy we all know__

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

Bass

Dr.

24

144 Am F G Am G

Voice

who shines white light and wants to show how ev-'ry-thing still turns to

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

Bass

Dr.

147 F G Am G F G

Voice

gold_____ And if you lis-ten ve-ry hard,_____

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

Bass

Dr.

150 Am G F G 25

Voice

the tune will come to you at last, _____

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

Bass

Dr.

152 Am G Fmaj7 F/G

Voice

When all are one and one is all _____ yeah _____

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

E. Pno.

Bass

Dr.

26

154 Am G pmaj7

Voice

to be a rock, and not to roll.

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

E. Pno.

Bass

Dr.

OUTRO (7:27) 27

156 Am Cmaj9/G Fmaj7 Fmaj9/#11 Am Cmaj9/G

Voice

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

E. Pno.

Bass

Dr.

The musical score for the OUTRO (7:27) section begins at measure 156. The key signature is A minor (Am) and the time signature is 4/4. The score includes staves for Voice, E. Gtr. 1, E. Gtr. 2, 12-Str. 1, 12-Str. 2, 12-Str. 3, E. Pno., Bass, and Dr. The guitar parts feature complex chordal textures and melodic lines. The piano part provides harmonic support with sustained chords. The bass and drums provide a steady rhythmic foundation.

159

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

E. Pno.

Bass

Dr.

Fmaj7

Fmaj13(#11)

Am

Cmaj9/G

Fmaj7

Cmaj13

rit. 162 Am Cmaj7/G Fmaj7 rubato 29

Voice

And she's buy- ing a stair- way to heav-en...

E. Gtr. 1

E. Gtr. 2

12-Str. 1

12-Str. 2

12-Str. 3

E. Pno.

Bass

Dr.

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

vs. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-11

DATE _____ IDEN. _____

DATE _____ EVID. _____

BY _____ Deputy Clerk

VISUAL EXHIBIT C

STAIRWAY TO HEAVEN

Words and Music by
JIMMY PAGE and ROBERT PLANT

Slowly

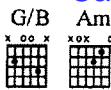
mp *Con pedale*

N.C.

N.C.

There's a la - dy who's sure all that glit-ters is gold and she's buy - ing a stair-way to

2



heav - en. When she gets there she knows _____ if the stores are all closed _____ with a

Fmaj7



word she can get what she came _ for. Ooh, _____






Fmaj7







ooh, _____ and she's buy - ing a stair - way to heav - en. There's a



sign on the wall _____ but she wants to be sure _ 'cause you know some - times words have two

mean - ings. In a tree by the brook _____ there's a song - bird who sings, _ some-times











all of our thoughts are mis - giv - en.







Ooh, _ it makes me won - der, _____

4



Ooh, _____ it makes me won-der.



There's a feel - ing I get _____ when I



look to the west, and my spir - it is cry - ing for leav - ing. _____ In my



thoughts I have seen rings of smoke through the trees, and the voic - es of those who stand look -

Am C G/B Am7 Dsus⁺ D

- ing. _____ Ooh, it makes me won-der,

Am7 Em D C D Am7 Dsus4 D

Ooh, _____ it real-ly makes me won - der.

Am7 Em D C D C G/B

And it's whis - pered that soon _ if we

Am C G/B F Am

all call the tune _ then the pip - er will lead us to rea - son _____ And a

6








new day will dawn _____ for those who stand long_ and the for - ests will ech - o with laugh -








- ter. _____

mf









If there's a bus - tle in your

f with a strong beat







hedge-row _____ don't be a-larmed now, It's just a spring clean for the May _____ queen. _____

Yes, there are two paths you can go by __ but in the long run there's still time to change the road __

__ you're on. And it makes me won-

- der. _____

Your head is hum-ming and it won't go __ in case you don't know,

Chord diagrams: C, G/B, Am, C, G/B, F, Am, C, G/B, Am7, Dsus4, D, Am7, Em, D, C, D, Am7, Dsus4, D, Am7, Em, D, C, D, C, G/B, Am.

8


the pip-er's call-ing you _ to join _ him, _ Dear la - dy. can you hear the

wind blow, and did you know your stair-way lies on the whis - p'ring _ wind. _

And as we wind _ on down the road _


our shad-ows tall-er than _ our soul. _ There walks a la - dy we all








know _____ who shines white light and wants to show _____





how ev - 'ry - thing still turns to gold. _____ And if you lis - ten ver - y








hard _____ the tune will come to you _ at last.








When all are one and one is all _____ to be a rock _ and not to

Am



roll.

rit.

Freely
Fmaj7



And she's buy - ing a stair - way _ to heav - en. _

mf Freely

AIRWAY TO HEAVEN

Words and Music by JIMMY PAGE
and ROBERT PLANT

Moderately

Am G# C/G D/F# Fmaj7 G/B A5

mp

2. G/B Am C D Fmaj7 Am G/B C G

D C D Fmaj7 C D

C/F Fmaj7 Am G# C/G D/F#

There's a la - dy who's sure all that glit - ters is gold, and she's

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




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















buy - ing _ a stair-way to heav-en. When she gets there she knows, _ if the

stores are _ all closed, _ with a word _ she _ can get what she came _ for.

Ooh, _ ooh, _ and she's buy - ing a stair - way to

heav-en. There's a sign on the wall, _ but she wants to be sure, _ 'cause, you

Chord diagrams: C, D, Em/F, Fmaj7, Am, G#+

know, some-times words have two mean - ings. In the tree by the brook there's a

Chord diagrams: C/G, D/F#, Fmaj7, G/B, Am

song - bird who sings. Some-times all of our thoughts are mis - giv - en.

Chord diagrams: Am, G#+, C/G, D/F#, Fmaj7

Slightly faster

Chord diagrams: G/B, Am, G/B, Am7, Dsus, D

Ooh, it makes me won-

Am7 D13sus D6 D9sus D6 Dsus

- der. Ooh, _____

D Am7 D13sus D6 D9sus D6

it makes me won-der. There's a

C G/B Am C G/B Fmaj7

feel - ing I get when I look to the west and my spir - it is cry - ing for leav -

Am C G/B Am

- ing. In my thoughts I have seen rings of smoke through the trees, and the

voic - es of those who stand look - ing.

Ooh, _____ it makes me won - der.

Ooh, _____ real-ly makes me won - der.

And it's whis - pered that soon _ if we

accel.

6



all call the tune _ then the pip - er will lead us to rea - son, and a



new day will dawn _ for those who stand long, _ and the for - est will ech - o with laugh -



- ter.



(2.) Oh, _ whoa, _ whoa, _ whoa, _ whoa. ____

12. D6 D9sus D6 C G/B Am

If there's a bus-tle in your hedge-row, don't be a-larmed now:

C G/B F Am7 C G/B

it's just a spring clean for the May - queen. Yes, there are two paths you can

Am C G/B F Am7

go by, but in the long run there's still time to change the road you're on.

C G/B Am7 Dsus D

And it makes me won -

Am7 3sus D6 D9sus D6 Am7 Dsus

- der.

D Am7 D13sus D6 D9sus D6

C G/B Am C G/B Fmaj7

Your head is hum-ming and it won't go, in case you don't know. The pip - er's call-ing you _ to join _

Am7 C G/B Am

— him. Dear la - dy, can you hear the wind _ blow? And did you know

Case No. 2:15-cv-03462

Michael Skidmore, etc.

vs. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-12

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VISUAL EXHIBIT D

68

No. 86.

RECIT.—"THY HAND, BELINDA."

Dmo.

Thy hand, Be-lin-da; dark - - ness shades me: On thy bo-som let me

pp

rest: More I would, but Death in-vades me: Death is now a wel-come guest.

No. 87.

SONG.—"WHEN I AM LAID IN EARTH."

*Larghetto.**Dmo.*

When I am laid, . . . am

Larghetto. *pp*

laid . . . in earth, may my wrongs . . . cre-ate No trou-ble, no

trou-ble in thy breast; When I am laid, . . . am

64

laid in earth, may my wrongs . . cre - ate No trou - ble, no

The first system of the musical score, measures 1-4. The vocal line begins with a treble clef and a key signature of two flats. The lyrics are "laid in earth, may my wrongs . . cre - ate No trou - ble, no". The piano accompaniment is in the grand staff (treble and bass clefs).

trouble in thy breast; Re - member me, re - member me,

pp *pp*

The second system of the musical score, measures 5-8. The vocal line continues with the lyrics "trouble in thy breast; Re - member me, re - member me,". The piano accompaniment includes dynamic markings *pp* (pianissimo) at measures 6 and 8.

but ah! . . for - get . . my fate. Re - member me, but ah! . . .

pp

The third system of the musical score, measures 9-12. The vocal line includes the lyrics "but ah! . . for - get . . my fate. Re - member me, but ah! . . .". The piano accompaniment includes a dynamic marking *pp* (pianissimo) at measure 11.

for - get my fate.

The fourth system of the musical score, measures 13-16. The vocal line continues with the lyrics "for - get my fate.".

dim. *pp*

The fifth system of the musical score, measures 17-20. The piano accompaniment includes dynamic markings *dim.* (diminuendo) at measure 18 and *pp* (pianissimo) at measure 19.

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Michael Skidmore, etc.

vs. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-12

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Deputy Clerk

VISUAL EXHIBIT D

68

No. 86.

RECIT.—"THY HAND, BELINDA."

Dmo.

Thy hand, Be-lin-da; dark - - ness shades me: On thy bo-som let me

pp

rest: More I would, but Death in-vades me: Death is now a wel-come guest.

No. 87.

SONG.—"WHEN I AM LAID IN EARTH."

*Larghetto.**Dmo.*

When I am laid, . . am

Larghetto. *pp*

laid . . . in earth, may my wrongs . . cre-ate No trou-ble, no

trou-ble in thy breast; When I am laid, . . am

64

laid in earth, may my wrongs . . cre - ate No trou - ble, no

trouble in thy breast; Re - member me, re - member me,

but ah! . . for - get . . my fate. Re - member me, but ah! . . .

for - get my fate.

dim. *pp*

The musical score is written for a voice and piano. The key signature has two flats (B-flat and E-flat), and the time signature is common time (C). The score consists of five systems. The first system contains the first line of music with the lyrics 'laid in earth, may my wrongs . . cre - ate No trou - ble, no'. The second system contains the second line of music with the lyrics 'trouble in thy breast; Re - member me, re - member me,'. The third system contains the third line of music with the lyrics 'but ah! . . for - get . . my fate. Re - member me, but ah! . . .'. The fourth system contains the fourth line of music with the lyrics 'for - get my fate.'. The fifth system contains the fifth line of music, which ends with a double bar line. Dynamics include *pp* (pianissimo) and *dim.* (diminuendo).

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VS. *Led Zeppelin, et al.*

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VISUAL

EXHIBIT

E

Prelude in E Minor

49

*Edited by
Russell B. Lanning*

This prelude should be played very legato. All tones should be sustained by the use of the pedal which should change at each change of harmony.

CHOPIN

EL2543

EL2543

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Michael Skidmore, etc.

VS. Led Zeppelin, et al.

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VISUAL

EXHIBIT

F

From: "Best of Karrin Allyson"

How Insensitive

Insensatez

by

ANTONIO CARLOS JOBIM

Lyrics by MARCOS VINICIUS DE MORAES and NORMAN GIMBEL

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<http://www.musicnotes.com>

HOW INSENSITIVE

(Insensatez)

Music by ANTONIO CARLOS JOBIM
Original Words by VINICIUS DE MORAES
English Words by NORMAN GIMBEL
Introduction adapted from Chopin's
Prelude in E Minor, Op. 28, No. 4

Moderately

Chord symbols and musical notation for the piano introduction:

- System 1: Gm/Bb , $Am11$
- System 2: $A\dim7$, $Bb7\sharp5/A\flat$, $Bb7/A\flat$, $A\flat\dim7$, $G7$
- System 3: $Gm7$, $G\dim7$, $Cm7/G$, $Cm6/G$
- System 4: $F\sharp\dim7$, $F7$, $Fm7$ (triplets)
- System 5: $Fm6$, $F\dim7$, $Cm(maj7)/E\flat$, Cm , $D7sus$, $D7$

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2

Am7 \flat 5/E \flat D \flat Am7 \flat 5/E \flat D7 \sharp 9/F \sharp D7 \sharp 9/F \sharp

Bossa Nova

Gm7 D7 \flat 9/F \sharp Gm7

D7 \flat 9/F \sharp Gm7 D7 \flat 9/F \sharp

Gm7 D7 \flat 9/F \sharp

- | | |
|-------------------|----------------------|
| 1. Ah, _____ | in - sen - sa - tez |
| 2. Vai _____ | meu cor - a - ção, |
| 3. (Instrumental) | |
| 4. How _____ | in - sen - si - tive |

Fm9

que vo - cê fez cor - a - ção mais sem cui -
ou - ve ra - zao us - a so sin - ser - i -
I must have seemed when he told me that he

C7/E Ebmaj9

da - do. Fez chor-ar de dor
da - de. Quem se - meia ven-to,
loved me. How un - moved and cold

Abmaj9 Am7b5

o scu a - mor um
diz a ra - zão col -
I must have seemed when

A7 Ebmaj9 Cm11 Dm11 D7#9

foi fra - co as - sim, pe - de per - dão, did I just turn and stare in ic -

as - sim tão des - per - dão a - paix -

Gm F#13 Fm11 Bb13

al - ma - do. Ah, meu cor - a -
o - na - do. Vai por - que quem
y si - lence? What was I to

Em11 A13 Ebmaj9

ção quem nunca a - mou
não per - de per - dão
do? What can you do

Cm11 D7#9 Gm7 Am7b5 D7#9

1.2.3.

não mer - e - ce ser a - ma - do.
não é nun - ca per - do - a - do.
when a love af - fair is

6

4.

Gm7 Cm7 D7#9 Gm7 Cm7 D7#9

o - ver? Não é nun - ca per - do - a - do.

3

Gm7 Cm7 D7#9

Não é nun - ca per - do - a - do.

rit.

Slowly (a cadenza)

Ebmaj7b5 D

gva. gva.

rit.

Gm

gva. rit.

*

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

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VISUAL EXHIBIT G

MORE
(Ti guarderò nel cuore)
from the film MONDO CANE

Copyright © 1962 by C.A.M. S.r.l. - Rome (Italy), Via Cola di Rienzo, 152

Music by NINO OLIVIERO and RIZ ORTOLANI
Italian Lyrics by MARCELLO CIORCIOLINI
English Lyrics by NORMAN NEWELL

Smoothly

More than the great - est love the world has known; this is the love I'll give to
More than the sim - ple words I try to say; I on - ly live to love you

you a - lone.
more each day. More than you'll ev - er know, my arms long to hold you so, my

life will be in your keep - ing wak - ing, sleep - ing, laugh - ing, weep - ing. Long - er than al - ways is a

long, long time; but far be - yond for - ev - er you'll be mine. I know I

nev - er lived be - fore and my heart is ver - y sure no one else could love you more.

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-16

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VISUAL EXHIBIT H

336

IT DON'T MEAN A THING (IF IT AIN'T GOT THAT SWING)

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 and Alfred Music (Print)

Words and Music by DUKE ELLINGTON
 and IRVING MILLS

Fast Swing

It don't mean a thing if it ain't got that swing, doo wah, doo wah, doo wah, doo wah, doo wah, doo wah. It don't mean a thing, all you got to do is sing, doo wah, doo wah, doo wah, doo wah, doo wah, doo wah. It makes no difference if it's sweet or hot; Just give that rhythm ev - 'ry - thing you got. It don't mean a thing if it ain't got that swing, doo wah, doo wah, doo wah, doo wah, doo wah, doo wah, doo wah, doo wah.

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

DEFENDANT'S EXHIBIT 2092-17

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VISUAL EXHIBIT

I

NIGHT AND DAY

from GAY DIVORCE

© 1934 (Renewed) WB MUSIC CORP.

Words and Music by
COLE PORTER

Moderately

Night and day you are the one, on - ly you
be - neath the moon and un - der the sun. Wheth - er near to me or
far, it's no mat - ter, dar - ling, where you are I think of you night and day.
Day and night why is it so, that this long -
ing for you fol - lows wher - ev - er I go? In the roar - ing traf - fic's boom, In the
si - lence of my lone - ly room, I think of you, night and day. Night and
day, un - der the hide of me, there's an oh, such a hun - gry yearn -
ing burn - ing in - side of me. And its tor - ment won't be through 'til you
let me spend my life mak - ing love to you, day and night, night and day.

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

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VISUAL

EXHIBIT

K

ONE NOTE SAMBA

(Samba De Uma Nota So)

547

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Original Lyrics by NEWTON MENDONCA
English Lyrics by ANTONIO CARLOS JOBIM
Music by ANTONIO CARLOS JOBIM

Samba Em7 Eb7 Dm7 C#7b5

This is just a lit - tle sam - ba built up - on a sin - gle note. Oth - er

Em7 Eb7 Dm7 C#7b5

notes are bound to fol - low but the root is still that note. Now this

Gm7 F#7b5 Fmaj7 Bb7

new one is the con - se - quence of the one we've just been through. As I'm

Em7 Eb7 Dm7 C#7b5 C

bound to be the un - a - void - a - ble con - se - quence of you.

Fm7 Bb7 Eb Fm7

There's so man - y peo - ple who can talk and talk and talk and just say noth - ing, or near - ly

Eb Ebm7 Ab7

noth - ing. I have used up all the scale I know and at the end I've come to

C# Fm6 C#7b5 Em7 Eb7

noth - ing, or near - ly noth - ing. So I come back to my first note, as I

Dm7 C#7b5 Em7 Eb7 Abmaj7

must come back to you. I will pour in - to that one note all the love I feel for you.

G7b5 Gm7 F#7b5 Fmaj7 Bb7

An - y - one who wants the whole show Re, Mi, Fa, Sol, La, Ti Do, he will

Eb D7 C#maj7

find him - self with no show. Bet - ter play the note you know. This is

1	2
C6	C6
G7#5	

USE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

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VISUAL EXHIBIT L

From The United Artists Motion Picture "THE HAPPY ENDING"

WHAT ARE YOU DOING THE REST OF YOUR LIFE?

Lyrics by ALAN and MARILYN BERGMAN

Music by MICHEL LEGRAND

Moderately with feeling

What Are You Do-ing The Rest Of Your Life? — North and south and east and west of your life? —
 times of your days, — All the nick-els and the dimes of your days. —
 deep in your eyes, — In the world of love you keep in your eyes, —

1. *To Coda* *Bm7-5* *Bm7 (E bass) E7*

— I have on-ly one re-quest of your life: — that you spend it all with me! — All the sea-sons and the
 — Let the rea-sons and the rhymes of your days —
 — I'll a-wak-en what's a-sleep in your eyes. —

2. *Bm7-5* *E7* *Amaj7* *A* *Bm7-5* *E9* *Amaj7*

— all be-gin and end with me. — I want to see your face in ev-'ry kind of light. In
Bm7-5 *E9* *Amaj7* *Abm7* *Db7-9*

fields of dawn and for-ests of the night. And when you stand be-fore the can-dles on a
Gbmaj7 *Gm7* *C7-9* *Fmaj9* *D.S. al Coda*

cake, Oh, let me be the one to hear the si-lent wish you make! Those to-mor-rows wait-ing
Coda *Bm7-5* *Bm7 (E bass)* *E7* *F6* *Bm7-5* *E9* *Fmaj7*

— It may take a kiss or two! — Thru all of my life, — Sum-mer, win-ter, spring and fall of my life,
F7-5 *Am (E bass)* *Bm7* *E7+5* *E7* *Am*

— All I ev-er will re - call of my life is all of my life with you! —

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VISUAL EXHIBIT

M

MY FUNNY VALENTINE

from BABES IN ARMS

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a Division of Rodgers & Hammerstein: an Imagem Company and WB Music Corp.

Words by LORENZ HART
Music by RICHARD RODGERS

Slowly

Chord symbols: Cm, G7/B, Cm7/Bb, Am7b5, Abmaj7, Fm9, Dm7b5, G7b9, Cm, G7/B, Cm7/Bb, F/A, Abmaj7, Fm7, Abm, Bb7b9, Ebmaj7, Fm7, Gm7, Fm7, Eb, Fm7, Gm7, Fm7, Ebmaj7, G7#5, G7, Cm7, Bbm7, A7b9, Abmaj7, Dm7b5, G7b9, Cm, G7/B, Cm7/Bb, F/A, Abmaj7, Dm7b5, G7b9, Cm7, B9, Bbm9, A7b5(#9), Abmaj7, Fm7, Bb7, Eb.

LYRICS:

BILLIE: My fun - ny val - en - tine, sweet com - ic val - en - tine, you make me smile in my
heart. _____ Your looks are laugh - a - ble, un - pho - to - graph - a - ble, yet, you're my
fa - v'rite work of art. _____ Is your fig - ure less than Greek; is your
mouth a lit - tle weak when you o - pen it to speak, are you smart? _____ But
don't change a hair for me, not if you care for me, stay, lit - tle val - en - tine,
stay! _____ Each day is Val - en - tine's Day. _____

CASE NO. Case No. 2:15-cv-03462

Michael Skidmore, etc.

VS. *Led Zeppelin, et al.*

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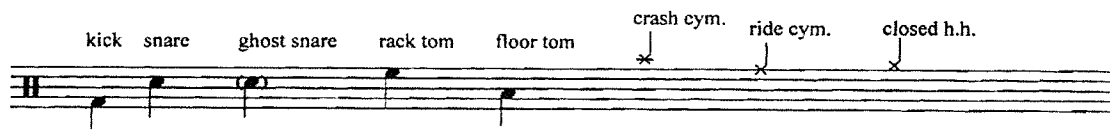
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VISUAL EXHIBIT N

"Stairway to Heaven" score —drum legend



SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

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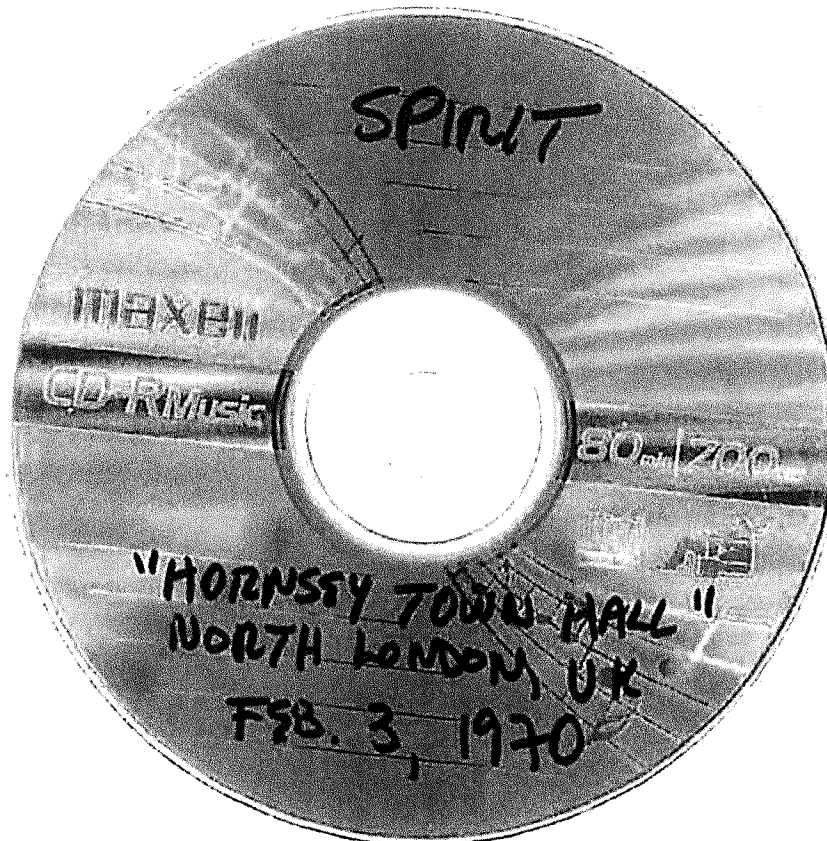
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Spirit
Hornsey Town Hall
North London, UK
February 3, 1970

01. Intro, tuning up & echoplex noodling ->
02. Sweet Stella Baby ->
03. 1984 ->
04. It's All The Same ->
05. Fresh Garbage
06. Jealous
07. It Shall Be ->
08. Poor Richard
09. Groundhog
10. Policeman's Ball
11. Aren't You Glad
12. ...drum solo ->
13. Mechanical World ->
14. I Got A Line On You
- Encore :::
15. Dark Eyed Woman ->
16. Uncle Jack

Total Time ::: 1:19:04



SKIDMORE V. LED ZEPPELIN ET AL.

Nos. 16-56057 & 16-56287

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Chord Progressions For Songwriters

Richard J. Scott

Writers Club Press
New York Lincoln Shanghai

Chord Progressions For Songwriters

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Writers Club Press
an imprint of iUniverse, Inc.

For information address:
iUniverse, Inc.
2021 Pine Lake Road, Suite 100
Lincoln, NE 68512
www.iuniverse.com

ISBN: 0-595-26384-4

Printed in the United States of America

190 Chord Progressions For Songwriters

C	G/B	Gm6/Bb	A7	<i>Homeward Bound</i> verse (Simon & Garfunkel—1966)
Cadd9	G/B	Gm/Bb	Am11	<i>If</i> verse (Bread—1971)
C	Em/B	Gm/Bb	A7	<i>Rainy Days And Mondays</i> verse (Carpenters—1971), <i>Until It's Time For You To Go</i> verse (Elvis Presley—1972), and <i>All By Myself</i> chorus (Eric Carmen—1976)
C	Em/B	Gm6/Bb	A7	<i>My Way</i> verse (Frank Sinatra—1969)
C	Em7/B	Em7b5/Bb	A7b9-A7	<i>Together Again</i> verse (Janet Jackson—1998)
C	Em/B	Bb	Dm/A	<i>Lay Lady Lay</i> verse (Bob Dylan—1963)
C	C/B	Gm6/Bb	A	<i>Life On Mars</i> verse (David Bowie—1971)
C	C/B	Bb	Bb/A	<i>Hold On Loosely</i> verse (38 Special—1981)
C	B	Bb	Am7	<i>I'm A Man</i> chorus (Spencer Davis Group—1967)
C	B+	Bb6	A7	<i>It Won't Be Long</i> bridge (Beatles—1963)

Several variations on the above descending bass line progressions include the “C-G/B-Am-E/G#” opening verse progression to *The Star Spangled Banner* (U.S. National Anthem—1814), the “C-Em/B-Am-Fm/Ab-C/G” verse progression to *Anytime At All* (Beatles—1964), and more recently, the “C-G/B-F/A-Fm/Ab” verse progression to *How Am I Supposed to Live Without You* (Michael Bolton—1990).

Am-Am/G#-Am/G-Am/F# Progressions

The bass notes of the "Am-Am/G#-Am/G-Am/F#" descending minor cliché (see separate "Pedal Points" chapter) form a minor key "8-7-b7-6" descending chromatic bass line. An example of this type of bass line is the opening verse progression to Led Zeppelin's 1972 classic *Stairway To Heaven* shown below. The chord voicings used in the *Stairway To Heaven* progression create movement in the top as well as the bottom. You can also hear this type of top and bottom movement in the intro to *Roundabout* (Yes—1972) and verse to *Babe I'm Gonna Leave* (Led Zeppelin—1969).

Am / Am9/G# /	C/G / D/F# /	Fmaj7 / / /	G Am / / /
---------------	--------------	-------------	------------

The box below shows other examples of this type of bass line. Notice that the "Am/G#," "Am/G," and "Am/F#" chords can be replaced by several other chords to create the "8-7-b7-6" chromatic descending bass line. Several of these progressions continue to move down to the "E" chord creating an extended "Am-Am/G#-Am/G-Am/F#-F-E7" descending chromatic bass line progression.

Am	Am/G#	Am/G	Am/F#-Fmaj7	<i>What Are You Doing The Rest Of Your Life</i> A section (Standard—1969)
Am	Am/G#	Am/G	Am/F#-Dm/F-E7	<i>Time In A Bottle</i> verse (Jim Croce—1973)
Am	Am/G#	Am/G	D9/F#	<i>Something</i> verse (Beatles—1969)
Am	E7/G#	C/G	F#m7b5	<i>A Song For You</i> verse (Leon Russell—1970)
Am-F/A	Emaj9/G#-E/G#	Gmaj7-G6	F#m7-F7-Esus4-E	<i>Could It Be Magic</i> chorus (Barry Manilow—1975)
Am6	G#o7 (add E)	Gm7	F#7b5-Fmaj7	<i>Quiet Nights Of Quiet Stars</i> verse (Getz/ Gilberto—1962)

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ISBN 978-0-634-01585-4

DISTRIBUTED BY



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11

LINE CLICHÉS

A line cliché is a stepwise descending or ascending line that moves against a single stationary chord. Line clichés may be used to reharmonize melodic phrases that are largely diatonic to a single key. Famous line cliché tunes include "My Funny Valentine," "Michelle," and the "Bond" theme from the early James Bond films.

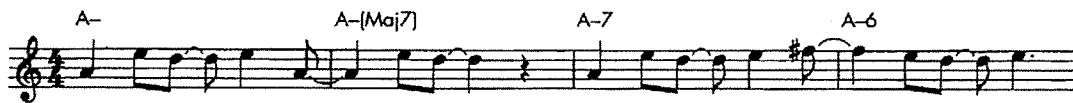


Fig. 11.1. Typical descending line cliché



Fig. 11.2. Typical ascending line cliché

In order to use a line cliché as a reharmonization technique, find a melodic phrase in which most of the notes are diatonic to the key. Then, eliminate the original progression and insert a single major or minor chord that is compatible with the melody notes. You can then embellish this chord with a line cliché. The example below illustrates this process.



Fig. 11.3. Original form

LINE CLICHÉS



Fig. 11.4. Phrase reharmonized with a single chord that is harmonically compatible with the melodic material

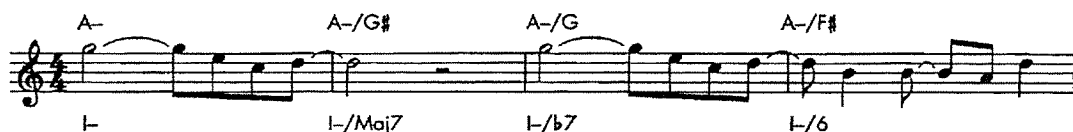


Fig. 11.5. Line cliché added: chromatic line descends in half steps against a static minor chord

The next example shows a chromatic line that rises and falls against the static minor chord. The line cliché movement is most often in half steps between the fifth and root of the chord being embellished.

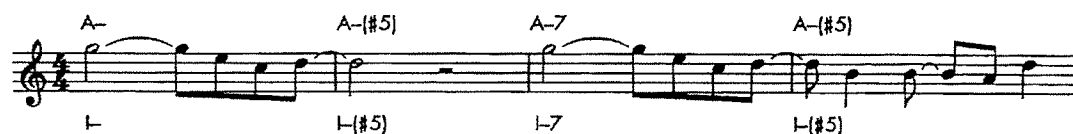


Fig. 11.6. Line cliché

Although most line clichés move in half-step increments, whole step motion between the fifth and the root is also possible. Fig. 11.7 illustrates a line cliché derived from the Aeolian scale.

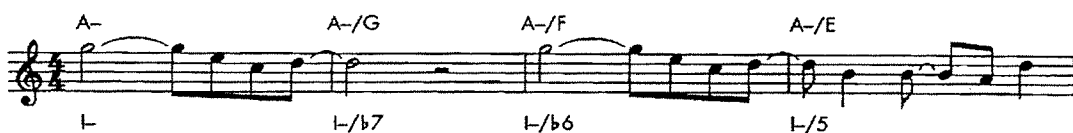


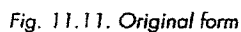
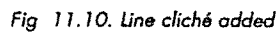
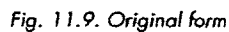
Fig. 11.7. Aeolian line cliché

The harmonic rhythm of the line cliché also may be varied. The example below doubles the number of chords per measure.



Fig. 11.8. Line cliché with faster harmonic rhythm

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LINE CLICHÉS

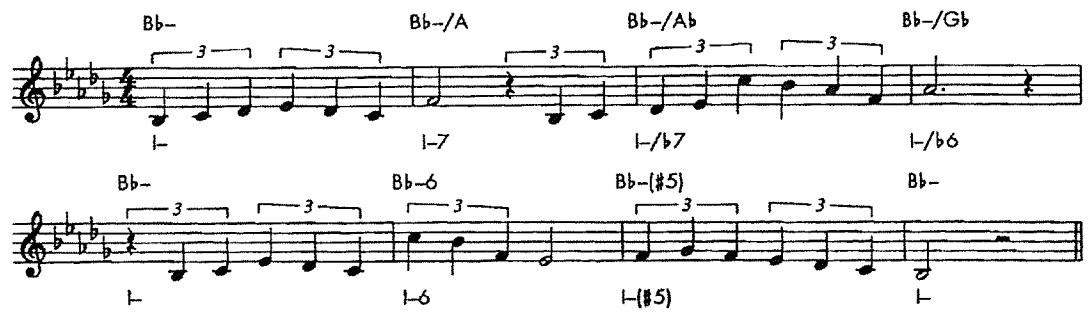


Fig. 11.12. Line cliché added

The harmonic rhythm should fit with the performance tempo. If the song is played at a fast tempo, a harmonic rhythm of one chord per measure will sound smooth.

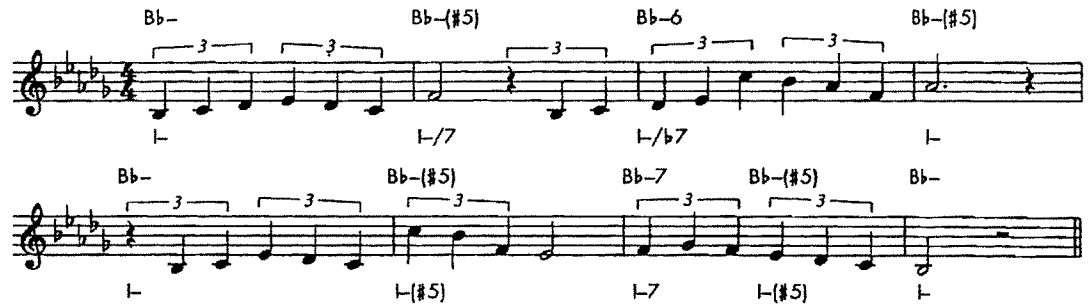


Fig. 11.13. A faster tempo calls for a slower harmonic rhythm.

If performance tempo is very fast, an even more sparse and extended harmonic rhythm would be a good choice.

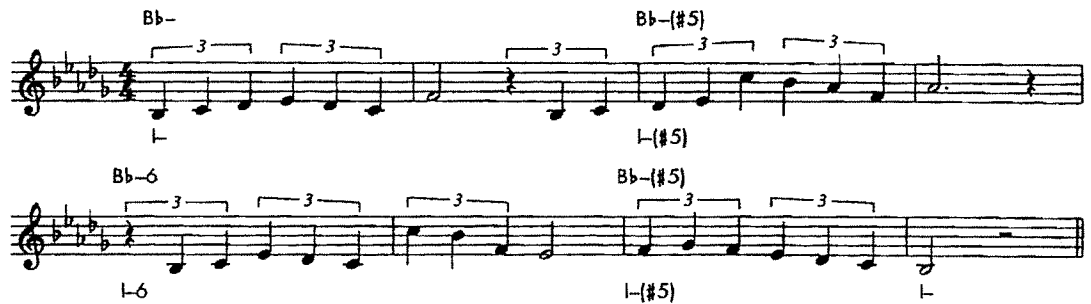


Fig. 11.14. A very fast tempo calls for an even slower harmonic rhythm.

Line clichés may also be used to reharmonize melodies in major keys.

Fig. 11.15. Original form

Fig. 11.16. Reharmonized using line clichés

Although line clichés are found on the I chord more often than on other diatonic chords, a short line cliché (one measure or less) may be applied to any diatonic chord.

The line cliché allows the writer to sustain a particular chord while adding momentum to the progression. However, repeated use of a line cliché on a chord other than the "I" may cause the listener to hear the chord being embellished by the line cliché as a new I chord. Overuse of this technique may weaken the sense of key within the progression.

The example below uses short line clichés based on II-7 and IVMaj7. Notice the increased sense of motion and the varied rhythmic placement of the lines. Each line cliché leads to its target chord by stepwise motion.

LINE CLICHÉS

Fig. 11.17. Line cliché based on II-7 and IVMaj7

II-7 sustained for two beats in root position then embellished with a line cliché on beats 3 and 4.

IVMaj7 embellished with a line cliché. The bass line moves on beats 1 and 2, then slows to a single bass note lasting through beats 3 and 4.

Fig. 11.17. Line cliché based on II-7 and IVMaj7

Here is a different example.

Fig. 11.18. Original form

Fig. 11.18. Original form

Short passing notes against a single chord may be used in the same spirit as a full line cliché. The reharmonized example below uses stepwise, passing sevenths in the bass to increase the sense of movement within the chord progression.

The example below is reharmonized with passing sevenths in the bass. Notice that a chord in root position always precedes a chord voiced over its seventh.

Fig. 11.19. Line cliché with passing sevenths in the bass

Fig. 11.19. Line cliché with passing sevenths in the bass

EXERCISES

Reharmonize the following examples using line clichés. Analyze your result using Roman numerals.

EXERCISE 11.1

"An August Moon" (R. Felts), original form

The original score for "An August Moon" is shown in two systems. The first system has four measures with Roman numerals: C-7, Bb, C-7, Bb, and AbMaj7. The second system has five measures with Roman numerals: C-7, EbMaj7, AbMaj7, DbMaj7, and G7sus4/D. Below the original score, the same melody is written out for reharmonization, with Roman numerals provided for each measure: I-7, bVII, I-7, bVII, bVIMaj7, C-7, bIIIMaj7, bVIMaj7, bIIIMaj7, and V7sus4/S.

Your reharmonization 1:

Two staves of music for reharmonization 1. The first staff contains the first four measures of the melody, and the second staff contains the last two measures. The reharmonization is indicated by the Roman numerals provided in the original score.

Your reharmonization 2:

Two staves of music for reharmonization 2. The first staff contains the first four measures of the melody, and the second staff contains the last two measures. The reharmonization is indicated by the Roman numerals provided in the original score.

LINE CLICHÉS

EXERCISE 11.2

"Homecoming" (R. Felts), original form

Chords: C, F6, C, F, G7sus4, A-7, F-6, D-7, Bb

Roman Numerals: I, IV6, I, IV, V7sus4, VI-7, IV-6, II-7, bVII

Your reharmonization 1:

Your reharmonization 2:

JAZZOLOGY

The Encyclopedia of
JAZZ THEORY
for All Musicians

by
ROBERT RAWLINS
and
NOR EDDINE BAHLA

Edited by Barry M. London

ISBN 978-0-421-08676-1

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Added ii-V's

Any chord may be preceded by a pair of ii-V's. They may be chained together in series and may be mixed with tritone subs.

Dm7	G7	Cmaj7	
iim7	V7	Imaj7	

becomes:

Em7 A7	Dm7 G7	Cmaj7	
iiim7 VI7	iim7 V7	Imaj7	

or chained:

F#m7b5 B7b9	Em7b5 A7b9	Dm7b5 G7b9	Cmaj7	
Em:iim7b5 V7b9	Dm:iim7b5 V7b9	Cm:iim7b5 V7b9	Imaj7	

(Charlie) "Parker's Blues" contains many chained ii-V7's.

Fmaj7	Em7 A7	Dm7 G7	Cm7 F7	Bbmaj7	
F: Imaj7	D: iim7 V7	C: iim7 V7	Bb: iim7 V7	Imaj7	

Here is the same progression with tritone subs added.

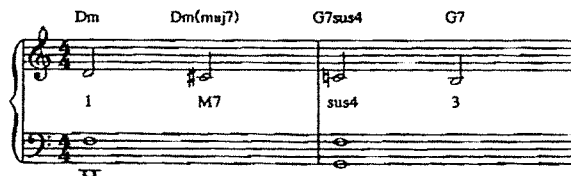
Fmaj7	Em7 Eb7	Dm7 Db7	Cm7 B7	Bbmaj7	
F: Imaj7	D: iim7 SV7/I	C: iim7 SV7/I	Bb: iim7 SV7/I	Imaj7	

CESH

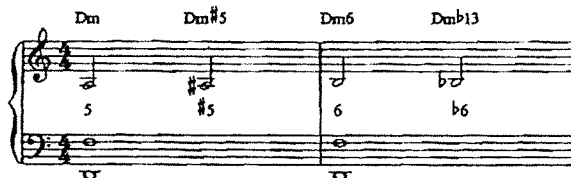
This acronym stands for **chromatic embellishment of static harmony** or **contrapuntal elaboration of static harmony**. Sometimes the technique is simply called line cliché. A moving chromatic line is introduced in what would normally be a static progression. Following is an example with a descending chromatic line over two measures of a static Dm7 chord.

Dm	Dm(maj7)	Dm7	Dm6
----	----------	-----	-----

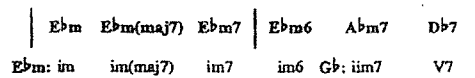
The same series of chromatically moving notes works well on a II-V sequence.



CESH may ascend as well as descend.



Dm^{#5} or Dm^{b13} are the same chord as Dm^{b6} or even B^b/D. Arrangers, composers, and improvisers frequently resort to this device when a minor chord encompasses two or four bars. "Round Midnight" is an example where this substitution occurs.



In Latin music, the chromatic descending bass line is mostly encountered as a reharmonization of a lengthy minor (or major) chord, as in the first 4 bars of the Latin standard "Besame Mucho."

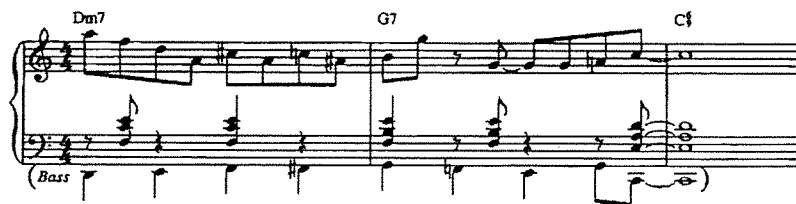
Sometimes the bass remains while the chromatic descending line occurs in both the intermediate voice and the upper voice. Here is a typical Latin montuno pattern where CESH is doubled.



Or in a II-V sequence:

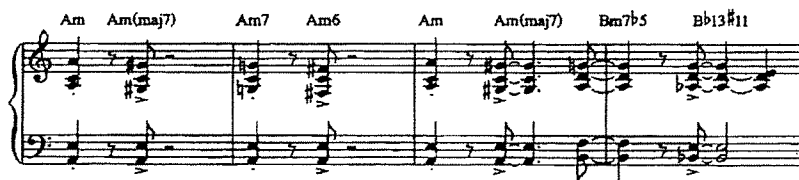


This device is often used in improvisation, especially in bebop.



"Summer of Forty-Two," "My Funny Valentine," "It Don't Mean a Thing," "In a Sentimental Mood," and "In Walked Bud" are good examples of CESH. Sometimes CESH is utilized as a 4- or 8-bar introduction to a tune.

"Kosma, "Manha Do Carnaval" ("Black Orpheus")



Elements Of The JAZZ Language For The Developing Improvisor

by
**Jerry
Coker**

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***DONALD BROWN.** Performer for all piano solo excerpts, and pianist and midi bassist on exercise tracks (A-DD) and the three play-along tunes.

KEITH BROWN. Midi drum set on exercise tracks and play-along tunes.

JERRY COKER. Tenor saxophonist for all trombone, tenor saxophone, and alto saxophone solo excerpts. Also pianist and midi bassist on accompaniment for solo excerpts.

VANCE THOMPSON. Trumpet on trumpet solo excerpts.

* - Mr. Brown's appearance on this recording is through the courtesy of Muse Records.

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CHAPTER 10

CESH (pronounced "Kesh")

Definition

The word comes from the initials of Contrapuntal Elaboration of Static Harmony. Though the term sounds like an unlikely prospect for the jazz language, it is a very widely-used device.

"Static harmony" indicates that a single chord remains in place throughout the CESH. "Contrapuntal elaboration" indicates that one member of the chord is in motion. There are four varieties of CESH, illustrated below:

Illustrations

IN MINOR, WITH THE ROOT IN MOTION



IN MINOR, WITH THE FIFTH IN MOTION



IN MAJOR, WITH THE ROOT IN MOTION



IN MAJOR, WITH THE FIFTH IN MOTION



If the reader will play these on a keyboard instrument, each example should sound extremely familiar, bringing to mind a multitude of songs and improvised solo fragments that have made use of CESH. Of the four varieties, the most common one by far is #239 (in minor, with the root in motion), and that is the type upon which we will focus for this segment. Sometimes an improviser will render an incomplete CESH; that is, play a CESH, but not to the full extension shown in the illustration. At other times the player will decorate or embellish a CESH to the point that the novice may have difficulty recognizing it as such. Since the melodies to jazz tunes may be even more familiar to the reader than the examples taken from solos, here are a few excerpts from the jazz repertoire.¹¹

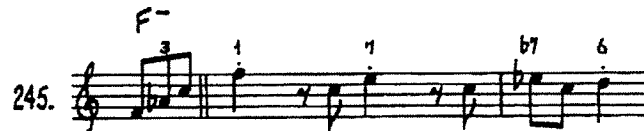
"Groovin' High" (Gillespie), 3rd measure (also occurs in the 7th and 11th bars):



"Tenor Madness" (Rollins), 9th measure:



"Bee-Bop" (Gillespie), beginning of introduction:



¹¹ - a lengthy listing of standard tunes and jazz tunes which use CESH as part of their chord progressions is given on pp. 43-44 of JAZZ KEYBOARD (Coker)

"Confirmation" (Parker), beginning of bridge/B section:



"Billie's Bounce" (Parker), 9th measure:



"Ornithology" (Parker), 7th measure (this same melodic fragment also appears in the last two measures of the bridge of Parker's "Thriving From A Riff"/"Anthropology").



The supposed harmonic setting for a CESH to take place is a minor chord of long duration. However, the examples from recorded solos will reveal that improvisers will also use CESH on II-7 chords, V7 chords (the minor CESH will actually be built on the fifth of the V7, as in G - on a C7), or the II-V in combination.

Examples From Recorded Solos

Bill Evans, piano ("Israel")



George Coleman, tenor saxophone ("Maiden Voyage")



Hank Mobley, tenor saxophone ("Remember")



Sonny Stitt, tenor saxophone ("After Hours")



Stanley Turrentine, tenor saxophone ("Cherry Point")



John Coltrane, tenor saxophone ("Blue Train")



Julian "Cannonball" Adderley, alto saxophone ("The Way You Look Tonight")



Charles Parker, alto saxophone ("K.C. Blues")



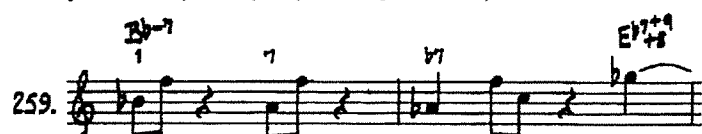
Clifford Brown, trumpet ("Pent-Up House")



Kenny Dorham, trumpet ("Blue Bossa")



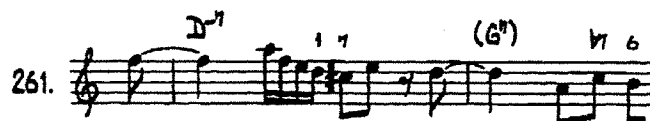
Kenny Dorham, trumpet ("Woody n' You")



Tom Harrell, trumpet ("Adjustment")



Freddie Hubbard, trumpet ("It's You Or No One")



Lee Morgan, trumpet ("Sidewinder")



Fats Navarro, trumpet ("Barry's Bop")



J.J. Johnson, trombone ("I'll Remember April")



Paul Chambers, bass ("This Can't Be Love")



Paul Chambers, bass ("The Theme")



John Scofield, guitar ("Fresh Out")



Ways To Practice/Ingrain

CESH is a harmonic element and therefore has no specific way to be realized melodically. Studying the examples from solos will show that there are some specific melodic tendencies that are shared by various improvisers, and those should be learned. However, there is also quite a variety of ways to express a CESH device included in the examples, and those should suffice to stimulate the reader's imagination as to the endless possibilities. A starter list of CESH patterns to be practiced in all keys with play-along exercises and tunes follows.

Exercises

268.

269.

270.

271.



**JERRY
COKER'S**

KEYBOARD

**For Pianists and Non-Pianists
(class or individual study)**

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Use Exercise 5 (in Section 1) for the practice of II-V-I's in minor, using rootless voicings. Be sure to practice both inversions (see Figure 41). Use the corresponding track in Aebersold's Volume 3 if you wish to work with a rhythm section for your practice of Exercise 5.

When the playing of Exercise 5 can be accomplished without too much strain, then play Progressions 5-11 (in Section 1, pages 26-28), which all involve the use of II-V-I in minor.

Finally, start reading tunes out of fake books, song books, or any source which includes chord symbols and melody, playing the chord with the left hand and playing the melody and improvisation with the right hand. It would also be helpful to learn to add a few notes to the chord in the right hand, since you will probably spend a good portion of your playing time providing accompaniment (comping) for others in the group, and you will want to engage both hands in those situations, using the rootless left hand voicings as a foundation.

Contrapuntal Elaboration of Static Harmony (CESH)

A large percentage of tunes will use a harmonic device called Contrapuntal Elaboration of Static Harmony, which we will call CESH (for obvious reasons!). "Contrapuntal Elaboration" means that one of the chord voices is in motion and "Static Harmony" means that the other notes of the chord are not in motion. Although CESH occurs more often in minor, it also is used in major. The moving voice is usually the chord root itself, descending in half-steps while the other notes of the chord are sustained, but sometimes it is the fifth of the chord that is in motion, ascending in half-steps (and often descending back to the starting place after that) while the other notes of the chord remain in place. A very simple form of CESH is shown in Figure 42 for each of the four possibilities in harmony (in minor with the root in motion, in minor with the fifth in motion; in major with the root in motion; and in major with the fifth in motion). A specific voicing will not be recommended, since it appears in a wide variety of voicings in recorded music, so the voicings in Figure 42 are merely to explain and illustrate the device in simple, clear voicings.

Figure 42 displays four musical examples of the Contrapuntal Elaboration of Static Harmony (CESH) device, arranged in two rows. Each row contains two examples, one for minor and one for major, both with a root in motion. The first row shows CESH in minor (root in motion) and CESH in major (root in motion). The second row shows CESH in minor (5th in motion) and CESH in major (5th in motion). Each example is written on a single staff with a treble clef and a key signature of one flat (B-flat). The first example in each row is labeled 'C-' and the second is labeled 'CΔ7'. The notes are sustained across measures, with only the root or fifth moving in half-steps.

FIGURE 42

The examples shown in Figure 42 can be in half-notes or quarter notes, as well as whole-notes, depending upon the durations of the chords as needed in a particular tune. One of the benefits of encountering a need or opportunity to use CESH is that often 2-4 measures will be consumed while playing a reasonably easy harmonic device (CESH), giving the keyboard player a little time in which to relax or think ahead to something following the CESH that might require more thought.

CESH is a dramatic musical device, one that is likely to tug at the heartstrings, and one which usually appears in songs which have the same intent. It is no coincidence that CESH appears in dramatic ballads like "What Are You Doing For The Rest Of Your Life", "My Funny Valentine", "Round Midnight", "In A Sentimental Mood", "Masquerade", or "Meaning Of The Blues", just to mention a few. Because CESH is a dramatic device, players and singers look for additional opportunities to use it, even in tunes which don't already contain a prescribed CESH, as the device may be used anywhere there is a II-V progression, playing the CESH in the key of the II minor (it overlaps the V as well, as will be shown later). A I chord in minor of long duration is also a target for a CESH.

In chord symbols, CESH might be indicated by one of the following:

C-	C- Δ 7	C-7	C-6	
/ / / /	/ / / /	/ / / /	/ / / /	or:

C-	C-/B bass	C-/B \flat bass	C-/A bass
/ / / /	/ / / /	/ / / /	/ / / /

(the chord durations might be two beats, even one beat each, depending upon the particular tune)

If CESH is used in a II-V situation and the bass note is, or the bass player plays the root of the V chord during its assigned duration, then the symbols might appear as:

D-	D- Δ 7	G7sus 4	G7
/ / / /	/ / / /	/ / / /	/ / / /

If CESH were to be played at every II-V situation in a tune like "Lover Man", then it could occur in bars 1-2, 3-4, 9-10, 11-12, 17-18, 21-22, 25-26, and 27-28!

For most of the readership, to merely hear CESH once or twice is sufficient to cause the memory to recall many tunes which use the device. CESH is also very easy to recognize by ear, when it appears on record or in concert. On the following pages is a list of some of the tunes which indicate the use of CESH or tunes on which it has become traditional interpretation to interpolate a CESH segment. Play as many as you can, either from knowing the tune or finding a copy of it somewhere. Look for even more examples.

EXAMPLES OF CESH

(Contrapuntal Elaboration of Static Harmony)

CESH in Minor (root in motion)	Location
After The Loving	3rd bar, 5th bar
Angel Eyes	beginning
A Taste of Honey	beginning
Billy Boy	9th bar
Bittersweet	beginning
Blue Skies	beginning
Bye Bye Blackbird	9th bar
Charade	beginning
Chim Chim Cheree	beginning
Confirmation	bridge (17th bar)
Cry Me A River	beginning
Falling In Love With Love	2nd half of 1st bridge (13th bar)
Feelings	beginning
For Once In My Life	3rd, 5th, and 9th bars
God Bless The Child	bridge (21st measure)
Golden Lady	beginning
I Could Write A Book	2nd bridge (25th bar)
I Feel Like Flying	
In A Sentimental Mood	beginning, 3rd bar
It Don't Mean A Thing	beginning
It Only Takes A Moment	13th bar
Just In Time	bridge (17th bar)
Like Someone In Love	2nd half of 1st bridge (13th bar)
Lover Man	beginning, 3rd bar, and bridge
Masquerade	beginning
Michelle	bridge (13th bar)
More	both bridges (9th, 25th bars)
Music To Watch Girls Go By	beginning
My Favorite Things	beginning
My Funny Valentine	beginning, 9th bar
My Romance	5th bar
Rainy Days and Mondays	
Round Midnight	beginning
Seventh Sign	beginning
Someday My Prince Will Come	5th bar
Strayhorn	3/4 interlude (4 consecutive ex.)
Summertime	beginning
Tenor Madness	9th bar
25 Or 6 To 4	beginning
What Are You Doing For The Rest Of Your Life	beginning

CESH in Minor (5th in motion)

Location

Angel Eyes	beginning
Invitation	beginning
Israel	beginning
James Bond Theme	beginning
Meaning Of The Blues	beginning
Memories Of You	bridge (17th bar)
Old Flame	beginning

CESH in Major (root in motion)

Bojangles	beginning
Ice Castles	beginning
If	beginning
Truly	beginning
With A Little Help From My Friends	beginning
You Are So Beautiful	beginning

CESH in Major (5th in motion)

Brazil	beginning
Lucky Southern	introduction
Make Someone Happy	beginning, 5th, 9th bar
Idaho	beginning

There are many ways to voice a CESH other than the simplistic examples used in Figure 42. Some of the possibilities that are in common use are shown in Figure 43 (below). Only minor keys were used in the figure, but only the fourth voicing shown cannot be played in major by simply raising the third of the chord from E^b to E^{\natural} . CESH with the fifth in motion (see the last voicing given in Figure 43) is much less flexible in voicing possibilities, hence only one is shown here. Note that the bass note is sometimes moving alone, other times is doubled in higher voice, and other times it is sustained while an upper voice moves.

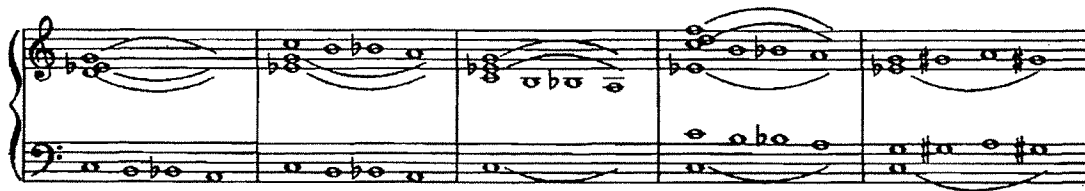
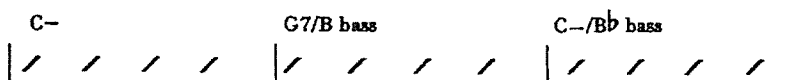


FIGURE 43

These voicings (and others invented by the reader) should be learned well enough to be able to play them in any key.

A distinction should be made between CESH and a number of harmonic devices which are very similar, but different. Some tunes, for example, will have a bass note which is descending, against an unchanging chord, but it descends in whole-steps instead of being chromatic, or it descends a whole-step and then a half-step. Those would be borderline cases of CESH, certainly not the stereotype. Sometimes the tune will have a moving bass note against an unchanging chord, but the motion is diatonic (scale-like), moving down a note sequence like C, B, A, G, C, B, A, G, C, etc. This is more like a vamping (repetitious) introduction to a brisk, folksy or march-like tune, and certainly not CESH. Still other tunes will have a bass line that descends chromatically, but the chord does change, like:



This is not a CESH, either, because by definition ("static harmony") the chord does not change in CESH.

The Dominant Seventh Chord With A Suspended Fourth

This chord is commonly called the *sus. 4* chord, as an abbreviated term. The chord has an interesting history. J.S. Bach used the chord (as did others in his day) two centuries ago, but he always resolved the fourth down a half-step (whole-step on minor chords) to become the third of the chord, in the classic 4-3 suspension or 4-3 appoggiatura so closely identified with his musical style (even in parody). Long after Bach's time it became unnecessary to resolve the fourth, becoming the *sus. 4* chord, much as the 9-8 suspensions and appoggiaturas eventually led to the ninth chord that no longer needed resolving in the mid-nineteenth century. The *sus. 4* chord appears in a few old standards, like Strayhorn's "Lush Life" (from the 30's), but it was largely ignored until the 50's. In 1956, Miles Davis recorded "Dear Old Stockholm" to which he added an eight-measure vamping figure between choruses that used a Gm7 with the bassist playing a pedal note of C (this has become one of the ways to describe, define, or symbolize a *sus. 4* chord, as a minor seventh chord with a bass note that is a fifth lower than the root of the minor seventh chord). It was rare, incidentally, in those days to sustain any chord for more than four measures, as the recording of "Dear Old Stockholm" predates the invention of modal tunes in jazz. This vamp figure most likely led to Miles' introduction of modal tunes to jazz in the recording of "Milestones", which uses that same chord (Gm7) with a C bass) and even the melody of the "Dear Old Stockholm" vamp in an even more extended way. Ironically, after Miles' next album, *Kind Of Blue*, was assimilated by his many playing admirers, modal tunes focused more on the minor seventh chord (without the pedal note of a fifth lower) as the chord to be elongated for 8-16 bars; i.e., "So What" (from the *Kind Of Blue* album), Coltrane's "Impressions", and Freddie Hubbard's "Mr. Clean". The *sus. 4* chord more or less dropped out of sight until Miles' "81" and especially Herbie Hancock's "Maiden Voyage" were released. Suddenly there was an explosion of *sus. 4* chords, appearing in tunes by pop artists like Carole King, James Taylor, and Billy Joel, and jazz artists like Hal Galper, Ron Miller, Dan Haerle, Jamey Aebersold, McCoy Tyner, and countless others. In one decade the *sus. 4* chord has gone from rarity to become the most popular, significant chord of our time!

Like CESH, the *sus. 4* chord is voiced in a variety of ways, with no single voicing predominating. Some of the more common voicings are shown in Figure 44. The first two voicings are for the left hand alone, for those times when the right hand is needed for playing the melody or for an improvised solo. The third voicing is the most common two-handed voicing and the easiest to find. Simply play the root in octaves in the left hand (in a fairly low register) and with the right hand play a major triad (usually in second inversion; that is, spelled as 5-1-3 instead of 1-3-5) whose root is a whole-step lower than the root of the assigned chord. In Figure 44 the voicing is a second inversion B-flat major triad over a C bass. The fourth voicing in the figure is the one used in Herbie Hancock's "Maiden Voyage", though the tune is in a different key. The fifth voicing could be described as a B-flat major seventh chord over a C bass and the sixth one could be thought of as a Gm7(9) chord over C. The seventh voicing in Figure 44 is the favorite of those

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#:1108

3. The four-measure chord progression in "Taurus" (identified in Musical Example 1 by chord symbols placed above the measure times in Section A1 and iterated one time in Section A2. progression in "Stairway" is also identified by chord symbols measures in Musical Example 1, and is iterated two time times in Verse 1, and one time in the Interlude. Starting four-measure chord progression in "Stairway", the additional notes that alter the harmony as compared with the first iteration of the acoustic guitar alone through measure 3.

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MUSICAL EXAMPLE 1

Four-measure chord progressions

Top two lines = Section A in "Taurus" with note values halved

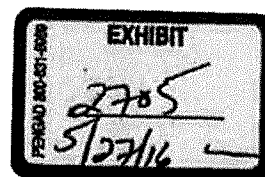
Lower two lines = Measures 1-4 in "Stairway"

Handwritten notes on the left: "Taurus" Deposit Copy, STH

4. The four-measure chord progressions in "Taurus" and "Stairway" are charted immediately below.² Notably, the chord progression in the second half of the

² Chord symbols without a slash ("/") after a letter are in "root" position in which the name of the chord is the lowest note. (The lowest note of a chord is sometimes termed the "bass" note although this does not have to actually be played on a bass.) Chords symbols with a slash ("/") are not in "root" position. Instead, the lowest note is the note

EXHIBIT 1
23



2

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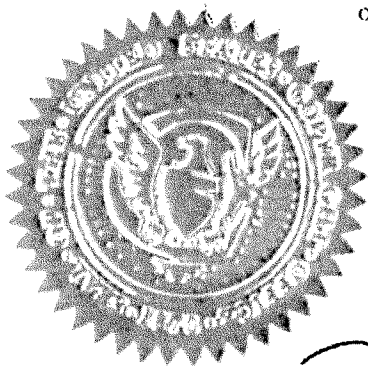
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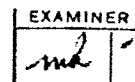


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Page 1

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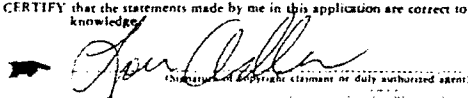
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Chord diagrams: C, G/B, Fmaj7, Am7, C, G/B

your stair-way lies on the whis - p'ring wind? _____ Oh. _____

Faster

Chord diagrams: D, Dsus2, Dsus, Dsus2, Dsus, Dsus2, Dsus, D

Chord diagrams: C, D(add4)/C, C, D(add4)/C, C, Dsus2, Dsus, Dsus2, Dsus

Chord diagrams: Dsus2, Dsus, D, C, D(add4)/C, C

G/B Am Am9/G

Play 6 times

Guitar solo ad lib.

accel.

Slightly faster

Am Am9/G Fmaj7 A5 G5

Play 4 times

And as we wind on down the road,

our shadows tall - er than our

soul, there walks a la - dy we all






know, _____ who shines white light and wants to








show _ how ev - 'ry - thing _ still turns to gold. _








And if you lis - ten ver - y hard, _ the tune will come _ to you _ at








last, when all are one and one is all, _____

12



to be a rock, and not to roll.




molto rit.

Slowly, freely



And she's buy - ing a stair - way to heav - en.

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STAIRWAY TO HEAVEN

Words and Music by
JIMMY PAGE and ROBERT PLANT

Slowly

Am G#⁺ 3 C/G D/F# Fmaj7

There's a la - dy who's sure all that glit - ters is gold and she's buy - ing a stair - way to

G Am G#⁺ 3 C/G D/F# 3

heav - en. When she gets there she knows if the stores are all closed with a

Fmaj7 G Am C D Fmaj7 Am

word she can get what she came for. Ooh, ooh, and she's

C G D C D 3 Fmaj7 Am

buy - ing a stair - way to heav - en. There's a sign on the wall but she wants to be sure 'cause you

C D Fmaj7 Am G#⁺

know some - times words have two mean - ings. In a tree by the brook there's a

C/G D/F# Fmaj7 G Am G#⁺ C/G D/F#

song - bird who sings, some - times all of our thoughts are mis - giv - en.

Fmaj7 G Am G Am7 Dsus4 D Am7 Em

Ooh, it makes me won - der,

D C D Am7 Dsus4 D Am7 Em D C D

Ooh, it makes me won - der. There's a

C G/B 3 Am C G/B F Am

feel - ing I get when I look to the west, and my spir - it is cry - ing for leav - ing. In my

C G/B Am C G/B F

thoughts I have seen rings of smoke through the trees, and the voic - es of those who stand look -

Am C G/B Am7 Dsus4 D Am7 Em D C D

ing. Ooh, it makes me won - der,

Am7 Dsus4 D Am7 Em D C D

Ooh, it real - ly makes me won - der. And it's

C G Am C G F Am

whis - pered that soon if we all call the tune then the pip - er will lead us to rea - son. And a

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STAIRWAY TO HEAVEN

Words and Music by
JIMMY PAGE and ROBERT PLANT

Epical Ballad: Chamber Folk to Heavy Rock

Slowly ♩ = 72 (gradual accelerando)

Intro:

Acoustic Guitar (Left Channel)

Fingerpicked: *p* *Let ring*

Am E+/G# C/G D/F# Fmaj7

G/B Am ** E+/G# C/G D/F#

Recorders (Arranged for Guitar*)
Fingerpicked: (Right Channel) *pp* *legato* *p*

Fmaj7 G/B Am C D

*Capo at VII using a cutaway guitar with easy access to the 22nd fret. All notes in TAB at VII are open strings.

**The open first string is not played here, but rings sympathetically.

***A gradual decrescendo continues for the next four measures to allow for the entrance of the recorders.

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Chords: Fmaj7, Am, C, G, Dsus4

Chords: C, D, Fmaj7, Asus4, C, D

A Verse:
 Chords: Fmaj7, Am, E+/G#, C/G, D/F#

mp There's a la - dy who's _ sure, _ all that glit - ters is gold _ and she's

loco

p

*The actual pitch of this note (e) is one octave higher

Fmaj7 **G/B Am** **E+/G#**

buy - ing _ the stair-way to heav - (en.) When she gets there she knows _ if the

C/G **D/F#** **Fmaj7** **G/B Am**

stores are _ all closed, _ witha word she can get what she came _ for.

4

C D Fmaj7 Asus4 G

Ooo, _____ and she's buy - ing a stair - way _ (to)

The first system of the musical score consists of three staves. The top staff is the vocal line, featuring the lyrics "Ooo, _____ and she's buy - ing a stair - way _ (to)". The middle staff is the piano accompaniment, with chords C, D, Fmaj7, Asus4, and G indicated above the notes. The bottom staff is the guitar line, showing fret numbers for each note.

Dsus4 D C D Fmaj7

heav - (en). There's a sign on the wall _ but she wants to be sure, _ 'cause you

The second system of the musical score consists of three staves. The top staff is the vocal line, featuring the lyrics "heav - (en). There's a sign on the wall _ but she wants to be sure, _ 'cause you". The middle staff is the piano accompaniment, with chords Dsus4, D, C, D, and Fmaj7 indicated above the notes. The bottom staff is the guitar line, showing fret numbers for each note.

B Ver.
Am

C D Fmaj7 *pp* E+/G#

know some - times words have two mean - ings. In a tree by the brook, there's a

1 0 2 3 2 2 0 0 0 7 5 5 7 6 5 7

C/G D/F# Fmaj7 G/B Am

song - bird, who sings, some-times all of our thoughts are mis - giv - en.

8 5 5 8 2 3 2 2 0 1 2 1 0 1 2 0 0 1 1 0 1 1 2 0 0 0 0 8 7

Am E+/G# C/G D/F# Fm₇

C Intro 2: ♩ = 78 *p* *mp*

G/B Am G/B Am7 D5^{sus4}_{sus2} D

Ooo, _____ it makes me won -

Acoustic 6 string(L.C.)
Strummed**

mp Let ring

Electric 12 string Guitar (Right Channel)
Strummed**

Let ring

*The Acoustic Guitar is multi-tracked from here on.

**With a pick.

Am7 Em/D D C/D D

- der. Ooo, _____

*Suggested strum

D Am7 Em/D D C/D D

_____ makes me won - der. _____ There's a

D Verse:

C G/B Am C G/B Fmaj7

feel - ing I get _ when I look to the west, _ and my spir - it is cry - ing for leav -

Let ring

Rhythm Figure 1

Am C G/B Am

- ing. In my thoughts I have seen _ rings of smoke through the trees _ and the

Let ring

*Suggested fingering.

**T = Thumb on ⑥

Chords: C, G/B, Fmaj7, Am, C, G/B

voic - es of those who stand look - ing.

Acoustic 6 string

Electric 12 string 1

Electric 12 string 2 (R&LC) *Rhythm Figure 2*

Am7, D^{sus4}_{sus2}, D, Am7, Em/D

Ooo, _____ it makes me won - der.

pp cresc. *mp*

End Rhythm Figure 2 *Gtr. 2 Tacet*

*Strings ④ and ② are muted while ③ and ① are open.

10

Chords: D C/D D Am7 D^{add4} D

Acoustic 6 string

Ooo, _____ (it) real-ly makes me won - der _____ (now.)

Electric 12 string 1

mp

Chords: Am7 Em/D D C/D D

And it's

End Rhythm Figure 1

**Separate track - Sustain and fade over.

***Separate track.

12

Chords: D C/D Am7 D^{sus4} Em

Oh.

Am7 Em/D D C/D D C G/B

(Drums enter) **F** *Verse: With Rhythm Figure 1*
With ad lib variations.
 ♩ = 90

If there's a bus-tle in your

Am C G/B Fmaj7 Am

hedge-row, don't be a-larmed now, it's just a spring clean for the May queen.

C G/B Am C G/B Fmaj7

Yes there are two paths you can go by, but in the long run, there's still time to change the road

Am.

D_{sus4}
sus2

*Doubled with an Electric 6 string (Telecaster?) from here on.

1

And it makes me wonder.

D 5us4

Em/D

Ahh.

G

Am

Your head is hum-ming and it won't go, in case you don't know,

** () Acoustic Guitar track only.

14

C G/B Fmaj7 Am C G/B

the pip - er's call - ing you _ to join _ him. Dear la - dy can you hear the wind _

Am C G/B Fmaj7 Am

blow, and did you _ know, _ your stair - way lies on the whis - 'prin' wind? _____

Rhythm figure 1 out

C G/B D

Acoustic Guitar (L.C.) Oh. _____

cresc. *sfz*

Electric 12 string (R&LC)

cresc. *sfz*

**The tempo is resumed by a cue from the guitarist.

Intro 3:

H Dsus4 D Dsus4 D D Dsus4 D C C(addD)+11 C(addD)

Acoustic Guitar out

Electric 12 string 1

Electric 12 string 2

ff *sfz*

C C(addD)+11 C(addD) D Dsus4 D Dsus4 D

C(addD)+11 C(addD) G/B

Let chord ring

*Notes in parenthesis are upper notes of quieter background track.

16 **Bridge: (Guitar Solo)**

*Electric 6 string Guitar 1 (R & L)

I

Am C/G F Fmaj7

ff *+1*

mp cresc.

Am C/G F Fmaj7

+1

Am C/G F **** Fmaj7

+1/4

*1958 Telecaster through a Fender Suproamp?
 **punch in from a separate track

*Played with a glass or metal slide.

Am C/G F *gva* Fmaj7 F Fmaj7 F

7 9 7 5 7 17 20 17 20 17 20 17 20 17 20 17 20 +1

7 6 6 6 6 5 6 6 7 6 6 8 6 6 7 6 7 7 6 7 5 5 7

7 6 6 6 6 5 6 6 7 6 6 8 6 6 7 6 7 7 6 7 5 5 7

7 6 6 6 6 5 6 6 7 6 6 8 6 6 7 6 7 7 6 7 5 5 7

J Verse:

♩ = 102 With Rhythm Figure 3 with ad lib variations

Am *ff*

G5

F

G(add A) Am

G5

Vocals 8va (doubled)

And as we wind on down the road, our shadows taller than our soul,

Electric 12 string 1 (RC)

Electric 12 string 2 (LC)

Electric 6 string 1 (RC)

*Palm muting is alternated (off then on) as in this two measure phrase from here on, but not notated.

Rhythm Figure 3

Electric 12 string Guitar 3 (RC)

*Mute strings with fret hand at current chord position.

22

F add A) Am G G(add A)

there walks a la - dy we all know

Am G F G(add A) Am G

who shines white light and wants to show how ev' - ry thing still turns to

*Right and left channels from here on.

F G(add A) Am G F G(add A)

gold. _____ And if you lis-ten ver-y hard, _____

1 6 3 2 5 3 7 7 5 5 3 3 1 5 3 2 5 3

Rhythm Figure 3 out

Am(sus9) G Fmaj7+11 G(add C) Am(sus9) G Fmaj7

the tune will come to you at last, when all are one and one is all.

Electric 12 string 1 (RC)

Electric 12 string 2 (LC)

Electric 6 string 2 (R&LC)

Electric 12 string 3 (RC)

Fmaj7 Amsus9 G5 Fmaj7 **

yeah, _ to be a rock, _ and not to roll.

Electric 12 string 1 (RC)

Electric 12 string 2 (LC)

Electric 6 string 1 (RC)*

Electric 6 string 2 (R&LC)

Electric 12 string 3 (RC)

*Pan to center.
 **Doubling ends.

26

Am

C/G

Fmaj7

Fmaj7/G

A 9

C/G

Chorus (RC): Lay - la!

mp

K

*div.**

p

+1

*Lead vocal in downstems, distorted chorus track in upstems.

*Pre-bent from here on

*VSO (variable speed/pitch oscillator) 1/2 step glide.

p *ppp* *Fade out*

buy - ing a stair - way _ to heav - en. _

*Oscillate guitar volume knob rhythmically.